Moving Points in Nephrology

Living Donor Kidney Transplantation: Improving Efficiencies in Live Kidney Donor Evaluation–Recommendations from a Consensus Conference

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Abstract

The education, evaluation, and support of living donors before, during, and after donation have historically been considered the roles and responsibilities of transplant programs. Although intended to protect donors, ensure true informed consent, and prevent coercion, this structure often leaves referring nephrologists unclear about the donor process and uncertain regarding the ultimate outcome of potential donors for their patients. The aim of this article is to help the referring nephrologist understand the donor referral and evaluation process, help the referring nephrologist understand the responsibilities of the transplant program, and offer suggestions about how the referring nephrologist can help to improve efficiencies in the process of donor education and evaluation. A partnership between referring nephrologists and transplant programs is an important step in advancing living kidney donation. The referring nephrologists are the frontline providers and are in a unique position to offer education about living donation and improve efficiencies in the process. Understanding the donor referral and evaluation process, the responsibilities of the transplant program, and the potential role referring nephrologists can play in the process is critical to establishing such a partnership.

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Introduction

Organ transplantation is a particularly challenging field of medicine in that it requires the involvement of a third party, either the living or deceased organ donor (1). Although clearly a superior alternative to dialysis for eligible individuals, the ability to perform kidney transplants is strictly limited by the number of organs available. Each year, the number of patients with ESRD listed for kidney transplantation rises, whereas there have been minimal increases in the number of kidneys available. There are <17,000 donor kidneys available each year for the 100,000 individuals on the kidney transplant waiting list (2). The supply of organ donors must be expanded to address the rapidly and continuously growing demand from the large number of patients waiting for a transplant (2). Owing to the limited number of deceased donor kidneys available for transplant, living donors are key to improving access to transplantation. Relative to deceased donor kidney transplantation, living donor kidney transplantation has superior graft and patient survival rates, has lower acute rejection rates, has fewer episodes of delayed graft function, avoids or reduces dialysis exposure, preempts rapidly deteriorating quality of life, and is more cost-effective in the long term (2–4). Despite the advantages of this treatment, rates of live kidney donation have declined in the United States in recent years.

Initiated by the American Society of Transplantation's Living Donor Community of Practice and cosponsored by 10 additional societies, a consensus conference on best practices in live kidney donation was conducted in Rosemont, Illinois, in June 2014 to identify and disseminate best practices for educating transplant and donor candidates, improve live donor evaluation efficiencies, and minimize barriers to live kidney donation. The top-level recommendations from this conference are now available in the full meeting report (5). One of the five workgroups at the consensus conference focused on improving efficiencies in the live kidney donor evaluation.

The education, evaluation, and support of living donors before, during, and after donation have historically been considered the roles and responsibilities of transplant programs (6–8). Although intended to protect donors, ensure true informed consent, and prevent coercion, this structure often leaves referring nephrologists unclear about the donation process and uncertain regarding the ultimate outcome of potential donors for their patients. Increased awareness of living donor program processes and outcomes may serve to reduce frustration and dissatisfaction between the referring nephrologist and transplant center. Therefore, the aim of this article is to help the referring nephrologist understand the donor referral and evaluation process, help the referring nephrologist understand the responsibilities of the transplant program, and offer suggestions about how the referring nephrologist can help to improve efficiencies in the process of donor education and evaluation.

Overview of the Donor Evaluation Process

The health and safety of the living kidney donor is the foremost responsibility of transplant programs (9). The living donor undertakes the risk of surgery and long-term health risks with no medical benefit from donation. The transplant community agrees that "The person who gives consent to be a live organ donor should be competent, willing to donate, free from coercion, medically and psychosocially suitable, fully informed of the risks and benefits as a donor, and fully informed of the risks, benefits, and alternative treatment available to the recipient" (10).

The purpose of the donor evaluation process is to ensure this goal is achieved. Although variability exists among transplant programs regarding the exact sequence of events, the donor evaluation process at most centers is comprised of specific components. The key components include the following: referral/initial screening, education and consent for evaluation, medical and psychosocial evaluation, and multidisciplinary selection committee review.

Referral and Initial Screening Process

Persons who are potentially interested in live donation are required to initiate contact with the transplant center via telephone, Internet, or in person to obtain further information or complete initial screening. This minimizes the risk of coercion by the family or staff and aims to ensure the potential donor is acting in an independent fashion. The potential donor provides basic information including demographics and medical/social history through a screening questionnaire. Patients with obvious contraindications (*e.g.*, diabetes, morbid obesity, hypertension or uncontrolled hypertension) to donation are notified at this time that they are not eligible to donate. If deemed appropriate to proceed, the potential donor is educated about the evaluation process and risks of donation. The potential donor is also informed that they may opt out at any point in the process, even up until the day of the operation. Most centers provide educational resources to the donor at this point either via written materials or electronic media.

Evaluation Process

Programs vary in how they manage the initial evaluation components depending on factors such as potential donor distance from the transplant center, concerns identified on initial screening, or availability of center resources. Some centers elect to perform some initial blood and urine screening tests first; others schedule the patient for an in-center evaluation to complete all testing in a 1- or 2-day evaluation appointment. Regardless of the strategy, there are specific tests the potential donor is required to complete. The Organ Procurement and Transplantation Network (OPTN)/United Network of Organ Sharing (UNOS) mandates minimal testing requirements for living donor evaluations, which are displayed in Table 1 (11). The goals of the evaluation are to assess immunologic compatibility, general health, surgical risk, and psychosocial risk of the donation to the potential donor. The evaluation is also intended to screen for conditions that may predict future complications from having only one kidney, determine the presence of transmittable diseases, and assess kidney anatomy and function (11).

Education and Informed Consent. Education about living donation is particularly complex because of the sensitive nature of the topic, the importance of providing the opportunity for true informed consent, and the number and variety of persons that need to be educated. This has become more complex because the live donor pool has expanded. Potential live donors vary in age, comorbidities, and relationship to the recipient. Currently any person interested in live donation can be considered, even a stranger. Social media has afforded the transplant candidate the ability to widen their reach in searching for a suitable kidney donor. The goal of education is therefore to ensure that all potential living donors understand all components and phases of the donation process. Information must be conveyed about the evaluation, procedures, risks, benefits, and alternatives to living donation. There are potential surgical, long-term medical, psychosocial, and financial risks associated with living donation that must be disclosed to the potential donor. The individual must also confirm that he/she is willing to donate, is not being coerced, is not receiving valuable consideration in exchange for donation, and understands they may decide not to donate at any time (11–13). The potential donor should also be aware that should he/she subsequently develop ESRD postdonation, the deceased donor allocation system assigns additional points, providing the previous donor priority for a deceased donor kidney transplant (11).

Blood and Tissue Typing Compatibility. Blood type testing can be performed locally at a laboratory or physician's office, via a kit mailed from the transplant center, or at the transplant center laboratory. Tissue typing and cross-match compatibility testing typically need to be performed by the transplant center's HLA laboratory via a mailed kit or blood draw at the transplant center. Historically, blood type incompatibility and antibody presensitization have represented challenging immunologic barriers to transplant. Kidney paired donation (KPD), or kidney exchange, facilitates transplantation for patients with healthy and willing but incompatible donors by exchanging incompatible donor/recipient pairs with other incompatible pairs through various combinations of two-way, three-way, or multiple pairings (14). With the increasing prevalence of KPD, ABO incompatibility and presensitization are no longer absolute contraindications to donation.

Laboratory and Radiologic Tests. These tests will vary depending on the donor's age and medical history, but the goal is to assess general health, kidney function, presence of infections or cancer, and kidney anatomy. A complete list of minimal laboratory and radiologic tests required for living kidney donors are included in Table 1 (11). Further testing may be required as deemed appropriate at any time during the evaluation process on the basis of each individual circumstance or per individual transplant center protocol.

Medical and/or Surgical Physician Evaluation. A medical evaluation of the potential living donor must be performed by a physician experienced in the living donation process. The evaluation includes a medical history, general and kidney-specific family history, social history, physical examination, and interpretation of laboratory and radiologic testing (Table 1) (11).

Psychosocial Evaluation. A living donor psychosocial evaluation must be performed by a clinical social worker,

Table 1. Organ Procurement and Transplantation Network/United Network of Organ Sharing requirements for living kidney donor medical evaluations (11)

Requirement	Specific Evaluations and Assessments
A general living donor history	1. A personal history of significant medical conditions which include but are not limited to the following: ● Hypertension ● Diabetes ● Lung disease ● Heart disease ● Gastrointestinal disease ● Autoimmune disease ● Neurologic disease ● Genitourinary disease ● Hematologic disorders ● Bleeding or clotting disorders ● History of cancer 2. History of infections 3. Kidney-specific personal history including the following: ● Genetic renal diseases ● Kidney disease, proteinuria, hematuria ● Kidney injury ● Diabetes including gestational diabetes ● Nephrolithiasis ● Recurrent urinary tract infections 4. Active and past medications with special consideration for known nephrotoxic medications 5. Allergies 6. Evaluation for coronary artery disease
General family history	Living donor's family history of coronary heart disease and cancer
Kidney-specific family history	Living donor's family history of the following: ● Kidney disease ● Diabetes ● Hypertension ● Kidney cancer
Social history	Living donor's history of the following: ● Occupation, employment status, health insurance status, living arrangements, social support ● Smoking, alcohol and drug use and abuse ● Criteria to assess increased risk for disease transmission as defined by the US Public Health Service Guidelines ● Psychiatric illness, depression, suicide attempts
Physical examination	Physical examination of the living donor including the following: ● Height ● Weight ● BMI ● Examination of all major organ systems ● BP taken on at least two different occasions or 24-hour or overnight BP monitoring
General laboratory and imaging tests	1.Complete blood count with platelet count 2. Blood type and screen 3. Prothrombin time or international normalized ratio 4. Partial thromboplastin time 5. Metabolic testing (to include electrolytes, BUN, creatinine, transaminase levels, albumin, calcium, phosphorus, alkaline phosphatase, bilirubin) 6. HCG quantitative pregnancy test for premenopausal women without surgical sterilization 7. Chest x-ray 8. Electrocardiogram

Table 1. (Continued)

Requirement	Specific Evaluations and Assessments
Other metabolic testing	1. Fasting blood glucose 2. Fasting lipid profile (cholesterol, triglycerides, HDL cholesterol, LDL cholesterol) 3. Glucose tolerance test or glycosylated hemoglobin in first degree relatives of patients with diabetes and in high-risk individuals
Kidney-specific tests	1. Urinalysis or urine microscopy 2. Urine culture if clinically indicated 3. Measurement of urinary protein and albumin excretion 4. Measurement of GFR by isotopic methods or a creatinine clearance calculated from a 24-hour urine collection 5. Hospitals must develop and comply with a protocol for polycystic kidney disease or other inherited renal disease as indicated by family history 6. Patients with a history of nephrolithiasis or nephrolithiasis (>3 mm) identified on radiographic imaging must have a 24-hour urine stone panel measuring the following: ● Calcium ● Oxalate ● Uric acid ● Citric acid ● Creatinine ● Sodium
Anatomic assessment	1. Assessment to determine the following: ● Whether the kidneys are of equal size ● If the kidneys have masses, cysts, stones ● If the kidneys have other anatomic defects ● Which kidney is more anatomically suited for transplant 2. The choice of test for radiologic imaging may be determined on the basis of the local radiologic expertise and surgical preference and may include CT angiogram or MR angiogram
Transmissible disease screening	1. Infectious disease testing must include all of the following: ● Cytomegalovirus antibody ● Epstein–Barr virus antibody ● HIV 1,2 antibody testing ● Hepatitis B surface antigen ● Hepatitis B core antibody ● Hepatitis B surface antibody ● Hepatitis C virus antibody testing ● Rapid plasma reagin test for syphilis 2. Living donor recovery hospitals must determine if the potential donor is at increased risk for TB and if so testing must include screening for latent TB using either intradermal PPD or interferon-γ release assay
Endemic transmissible diseases	For the following infectious diseases, recovery hospitals must determine if the potential donor is from an endemic area, and if so they must test for the following ● Strongyloides ● Trypanosoma cruzi ● West Nile virus
Cancer screening	Recovery hospitals must develop and comply with protocols consistent with the American Cancer Society to screen for the following: ● Cervical cancer ● Breast cancer ● Prostate cancer ● Colon cancer ● Skin cancer ● Lung cancer

BMI, body mass index; HCG, human chorionic gonadotropin; CT, computed tomography; MR, magnetic resonance; TB, tuberculosis; PPD, Purified Protein Derivative.

psychologist, or psychiatrist. The evaluation includes assessment of mental health, including substance abuse history, ability to make an informed decision, and ability to cope with stress or adverse outcome (15). The psychosocial assessment also evaluates whether the decision to donate is free of coercion and other undue pressures. The potential donor's social support, employment status, and financial status are reviewed to ensure that the donor has a realistic plan for donation and recovery. The living donor team seeks to ensure the potential donor has appropriate social, emotional, and financial support available throughout the entire donation process. The donor is assessed for understanding of the short- and long-term medical and psychosocial risks for both the living donor and recipient. It is also important to ensure the donor understands the potential financial implications of living donation and the potential effect on the donor's ability to obtain future health, life, and disability insurance (6,11).

Independent Living Donor Advocate. For any individual who is undergoing evaluation to be a living donor, the transplant center must designate and provide the donor with an independent living donor advocate (ILDA). The advocate is the key contact for each potential living donor and typically meets with the donor during the initial evaluation period. Variability exists among transplants programs in terms of who is delegated as the ILDA. Some programs have developed an ILDA team with multiple members, whereas others chose to designate a single person to perform this role. Regardless of the structure, the ILDA is not involved with the potential recipient evaluation or status. The role of the ILDA is to advocate for the rights and best interests of the potential and actual living donor. The ILDA also ensures the potential donor receives necessary information to make an informed decision about donation (11,16).

Multidisciplinary Selection Committee. After completion of all evaluation components and testing, the potential donor's case is presented at a multidisciplinary team meeting comprised of all members of the living donor team. The members of the multidisciplinary team include the medical and surgical physicians, living donor coordinator, social worker/psychologist/psychiatrist, ILDA, financial coordinator, pharmacist, and dietician (17). This ensures that each team member's expertise and experiences are incorporated when making a determination of the potential donor's medical and psychosocial suitability for donation.

If the living donor team determines the donor's risk is greater than what is currently medically acceptable, the team will not allow the donor to proceed regardless of what the donor would like to do (6). The donor is then notified of the outcome. If approved, the donor is encouraged to communicate with the recipient to schedule a surgery date. If deemed unacceptable to donate, the individual is offered support and counseling regarding the reason he/she was declined. In such cases, the transplant center must inform the potential donor that a different center may evaluate the potential donor using different selection criteria (11).

Reasons for Nondonation

Reasons for potential living donor exclusion vary on the basis of center-specific evaluation practices and eligibility criteria. Living donor programs may exclude a potential donor with any condition that, in the judgment of the team, causes the donor to be unsuitable for donation (11). This may result in a donor being declined in one center and a suitable candidate in another; however, most follow the Amsterdam guidelines, and all adhere to UNOS policies regarding the minimum testing required for clearance of a potential living donor (Tables 1 and 2) (11,18). Programs continue to have varying approaches to the evaluation of living donors. Some accept potential donors with hypertension, small kidney stones, and cigarette or marijuana use, whereas others do not. These variabilities are in part caused by the absence of controlled studies or the very limited long-term data on which to base exclusion criteria for potential living donors (19). However, the OPTN/UNOS, in an attempt to maximize donor safety, has established minimum absolute exclusion criteria, displayed in Table 2 (11). As long-term data continue to evolve, transplant programs will have more information to improve the evaluation of living donors and establish more uniform exclusion criteria across centers.

Data regarding reasons for nondonation are limited, with many studies conducted before the emergence of KPD at a time when ABO incompatibility was the most common barrier to donation. Most studies are single-center reports with variable exclusion criteria and consequently have limited generalizability. Even so, published reports show that only 10%–20% of the potential donors who contact the center proceed to actual donation (20–26). This low conversion rate highlights the complexity of the living donor evaluation and candidacy process and the significant and time-consuming workload common in most living donor programs. A recent report by Rodrigue and colleagues suggests further reasons for the decline in living donation over the last few years, such as the financial recession and the increasing discovery of incidental findings on computed tomography angiograms, leading to donor decline (27).

Table 2. Organ Procurement and Transplantation Network/United Network of Organ Sharing exclusion criteria (11)

Exclusion Criteria
Kidney recovery hospitals may exclude a donor with any condition that, in the hospital's medical judgment, causes the donor to be unsuitable for organ donation
Kidney recovery hospitals must exclude all donors who meet any of the following exclusion criteria:
• Both <18 years old and mentally incapable of making an informed decision
• Uncontrollable hypertension or history of hypertension with evidence of end stage organ damage
• HIV
• Diabetes
• Active malignancy or incompletely treated malignancy
• High suspicion of donor coercion
• High suspicion of illegal financial exchange between donor and recipient
• Evidence of acute symptomatic infection (until resolved)
• Diagnosable psychiatric conditions requiring treatment before donation, including any evidence of suicidality

Independent Living Donor Team

Most transplant teams maintain an independent living donor team to ensure the best interest of the potential living donor is a priority and to prevent and possibility of a conflict of interest. The separation of the potential donor and recipient teams also helps to maintain living donor confidentiality. Transplant programs are required to take precautions to maintain confidentiality for the potential living donor and recipient (11). Published rates of withdrawal from living kidney donor evaluation are rare, but the limited available data offer that 13%–27% of individuals who begin the process ultimately decide not to donate (26,28). Members of the transplant community have voiced concerns that potential living donors may feel pressured or coerced, especially if the intended recipient is a relative (28,30–34). The OPTN/UNOS requires that potential living donors must be offered the opportunity to stop the donor process at any time point and to do so in a way that is protected and confidential. The transplant center's ILDA is available to assist the potential donor during this process (11). Many centers provide the donor with an opt out, meaning the recipient is only advised that the donor was found to be unsuitable for donation (28).

Surgery/Hospitalization/Recovery

Laparoscopic nephrectomy was introduced in 1995, and hand-assisted laparoscopic nephrectomy was introduced in 1998. These surgical techniques revolutionized living organ donation by significantly reducing the size of the incision, length of hospital stay, postoperative pain and recovery time, and time until return to normal preoperative activities, including work (14,35). These techniques were quickly adopted to the point that nearly 98% of donor nephrectomies are performed laparoscopically today (2,14). Although conversion to an open nephrectomy is a rare event, it is always a risk when undergoing a laparoscopic nephrectomy. Hospitalization following an uncomplicated laparoscopic donor nephrectomy is typically 2–3 days. The recovery period, including return to work or normal activity, is between 4 and 8 weeks in most circumstances (35,36). Many donors are able to resume nonstrenuous activities in 2–3 weeks, including return to work for those who have sedentary jobs.

Long-Term Follow-Up

The transplant community is committed to ensuring the long-term health of living donors and monitoring the safety of living donation. The collection of follow-up information postdonation is important for awareness of and intervention for health problems, understanding the long-term risks of donation, and education of future donors so they can make informed decisions (37). In an attempt to promote donor safety, the OPTN/UNOS mandates the transplant centers submit clinical (*e.g.*, patient status, kidney complications, development of hypertension or diabetes) and laboratory (*e.g.*, serum creatinine, urine protein) follow-up data on living donors at 6 months, 1 year, and 2 years after donation (11).

Commonly reported transplant center barriers to obtaining living donor follow-up information include lack of donor engagement in the follow-up process, lack of donor desire to return to the program for medical tests, outdated contact information for donors, and lack of clarity regarding billing and payment for the follow-up assessments (37,38). Transplant programs are encouraged to inform potential donors about the benefit and importance of follow-up postdonation (11). Donor engagement and commitment are critically important to ensuring the safety of living donation and the acquisition of long-term follow data. Some living kidney donors are seen at the transplant center; others (because of distance or preference) are seen by primary care physicians who are often uncertain how to evaluate living donor kidney function.

Role of the Referring Nephrologist

The lack of communication and information about living donor program processes and outcomes often prove frustrating for referring nephrologists when attempting to develop a plan of care for their patients. Opportunities exist for a partnership between referring nephrologists and transplant programs in regard to donor education, evaluation, and long-term follow-up. We offer suggestions about how to bridge the communication gap between referring nephrologists and transplant programs and the role referring nephrologists could play in improving efficiencies in the donor evaluation process (Table 3).

Table 3. Key recommendations for referring nephrologists to help improve the live kidney donor evaluation

Key Recommendations	
All health care professionals involved in care of the kidney patient should be informed of the live donor evaluation process	• Benefits of LDKT • Donor inclusion/exclusion criteria • Evaluation process • Donor confidentiality
Develop improved partnerships between the referring nephrologist and the transplant program	• Transplant candidate referral phase • Donor identification and screening phase • Donor evaluation phase • Donor follow-up phase
Live donor transplant education and advocacy	• Transplant candidate education regarding LDKT • Transplant candidate social network education regarding LDKT and donation • Facilitation of donor identification • Identification of coercion and family pressures • Facilitate identification of donor champions/advocates

LDKT, live donor kidney transplant.

Living Donor Education

Inadequate education caused by limited access to information for living kidney donors has been identified as a factor that may prevent or discourage potential donors from living organ donation (39–42). Referring nephrologists are uniquely positioned to provide initial and ongoing living donor education to their patients (transplant candidates) and also their family members and social support network who may potentially serve as living donors. Transplant programs should routinely provide referring nephrology providers with their living donor protocols, including evaluation processes, inclusion and exclusion criteria, and donor educational materials. The referring nephrologist would then be able to educate both the transplant candidate and any potential donors regarding the living donor referral and evaluation process. This would help to ensure potential donors receive a robust education regarding the planned process up-front to avoid surprises and misconceptions. Early education also helps potential donors prepare mentally, emotionally, and financially for the evaluation and donation process.

Transplant Candidate Education and Advocacy

An invaluable benefit to the involvement of the referring nephrologist is that he/she may know things that the transplant center does not. The referring nephrologists and dialysis centers, as the frontline providers for most transplant candidates, have access, frequent contact, and relationships with the transplant candidates and their family members that the transplant center does not have the opportunity to develop. The referring nephrologist–patient relationship is often built on trust, and early conversations about live donation may be received better and facilitate the pursuance of live donor transplant. Additionally, the referring nephrologist or dialysis center is likely aware of relationships and circumstances unknown to the transplant center. He/she may know of relationships where there is a strong potential for pressure, coercion, or financial exchange for donation.

The referring nephrologist may also know of family members who are and are not in a position to donate. For those family members who are not eligible to donate, the referring nephrologist could play an important role in encouraging advocacy on behalf of the transplant candidate. Barnieh and colleagues demonstrated that knowledge of how to ask someone to donate was the most prevalent barrier to living kidney donation identified by transplant candidates (42). Donor champions in the family have proven to be helpful in informing the transplant candidate's social network about the need for live donor transplant (43).

Initial Donor Screening and Evaluation

The referring nephrologist is a key component to improving efficiency and quality of the initial donor screening and evaluation process. In some cases, it would be ideal for initial donor screening to be performed locally before formal evaluation at the center to improve efficiency, reduce resource utilization, and avoid nonproductive time and travel expenses for the potential donor. The ability to perform simple initial screening tests, such as height, weight, body mass index, or BP, could determine if potential donors meet the initial inclusion criteria for donor evaluation. Many donors, particularly those who live significant distances from the transplant center, have difficulty identifying local resources and facilities to begin the initial evaluation process. Examples include the ability to use the local nephrologist office for initial blood tests such as blood typing or phlebotomy laboratories for tissue typing and cross-match kits from the transplant center. Additionally, potential donors could be encouraged to have a physical with their primary care physician, including all age-appropriate health screening (*i.e.,* mammography, colonoscopy, Pap smear), ahead of time to expedite evaluation processes. If the potential donor has a complex medical history, assistance with gathering past medical records will also facilitate prompt assessment of suitability.

The engagement of local nephrologists in the initial donor screening process could improve efficiency and reduce inconvenience for the potential donors. Excluding donors early in the process who are not eligible for donation improves the efficiency and increases the possibility of identifying appropriate potential donors in a more timely fashion. Ultimately, the decision for eligibility still lies with the transplant program on the basis of aforementioned protocols, inclusion/exclusion criteria, and selection processes to avoid any concerns of coercion even among the medical community who obviously we look to partner for recipient opportunities in transplantation.

Long-Term Follow-Up

Living donors, who typically feel quite well after donation, may not readily understand the benefit of long-term monitoring or follow-up. As such, return trips to the transplant center for clinical examination and laboratory tests may be identified as inconvenient or insurmountably difficult. The ability to partner with a referring nephrologist could be a way to facilitate long-term follow-up for donors so they get key monitoring and an expert to provide recommendations on factors such as reduced GFR postdonation or management of hypertension. The ability to establish a plan for local follow-up before donation may improve long-term follow-up rates and early identification of health issues that arise postdonation.

Conclusion

A partnership between referring nephrologists and transplant programs is an important step in advancing living kidney donation. Referring nephrologists are frontline providers and are in a unique position to offer education about living donation and improve efficiencies in the process. Understanding the donor referral and evaluation process, responsibilities of the transplant program, and potential role they can play in the process is critical to establishing such a partnership. Transplant programs should strive to engage referring nephrologists in living donor education, evaluation, and long-term follow-up.

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