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DONATE TODAY SO YOUR LOVED ONE CAN RECEIVE A FUTURE LIVE DONOR KIDNEY: ARE KIDNEY VOUCHERS ENFORCEABLE CONTRACTS?

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INTRODUCTION

Approximately 115,000 patients are on the transplant waiting list,[1] and approximately 95,000 of them are waiting for kidneys.[2] The demand for kidneys "greatly exceeds supply[3] and the gap is growing."[4] About twenty-two patients die each day because they did not receive a kidney in time.[5]

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[1] *See Data*, UNITED NETWORK FOR ORGAN SHARING (UNOS), https://unos.org/data/ (giving the number of patients on the transplant waiting list) (last visited Apr. 13, 2018).

[2] *See Waiting List Candidates by Organ Type*, UNOS, https://unos.org/data/transplant-trends/waiting-list-candidates-by-organ-type/ (last visited Apr. 13, 2018) (giving the number of patients waiting for a kidney transplant).

[3] *See* Samuel J. Kerstein, *Kidney Vouchers and Inequity in Transplantation*, 42 J. MED. & PHIL. 559, 559 (2017) ("During 2016, approximately 19,000 kidney transplants took place, meeting only approximately one-fifth of the demand.").

[4] Lanie Friedman Ross, James R. Rodrigue & Robert M. Veatch, *Ethical and Logistical Issues Raised by the Advanced Donation Program "Pay It Forward" Scheme*, 42 J. MED. & PHIL. 518, 518 (2017) (describing increased willingness to accept lower quality donors).

[5] *Organ Donation and Transplantation Statistics*, NAT'L KIDNEY FOUND., https://www.kidney.org/news/newsroom/factsheets/Organ-Donation-and-Transplantation-Stats (last visited Mar. 25, 2018) ("In 2014, 4,761 patients died while waiting for a kidney transplant. Another, [sic] 3,668 people became too sick to receive a kidney transplant.").

To help respond to this shortage, the National Kidney Registry ("NKR") implemented a kidney voucher program in December 2014.[6] The idea for the program began with a proposal by Howard Broadman, a sixty-four-year-old retired judge.[7] He suggested to the University of California, Los Angeles ("UCLA") Kidney Transplant Program that he donate his kidney in return for a promise that his four-year-old grandson would receive priority for a live donor kidney when a transplant became necessary.[8] Broadman's grandson was born with one poorly functioning kidney and was expected to need a kidney transplant within the next ten to fifteen years.[9] By the time his grandson needed the transplant, Broadman would be too old to donate.[10]

To accommodate Broadman's request and help others who might also want, or need, to donate before their intended recipients are ready to receive a transplant, UCLA worked with the NKR to structure the kidney voucher program. The NKR was chosen to administer the program because "it is the leading multicenter [Kidney Paired Donation

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[6] *See* Jeffrey L. Veale et al., *Vouchers for Future Kidney Transplants to Overcome "Chronological Incompatibility" Between Living Donors and Recipients*, 101 TRANSPLANTATION 2115, 2116 (2017) ("In December 2014, [Broadman] underwent a living donor nephrectomy at UCLA, initiating a transplant chain with [three] recipients, who discontinued dialysis and were removed from the deceased donor waitlist."); *see also* Ross, Rodrigue & Veatch, *supra* note 4, at 518 (noting that the number of living donors has stabilized since 2011, totaling between 5,600 and 5,700 kidney donors annually).

[7] *See* Kristen Fischer, *Donate a Kidney Now, Get a Voucher for One Later*, HEALTHLINE (July 15, 2016), https://www.healthline.com/health-news/donate-kidney-now-get-one-later (describing how kidney voucher program works).

[8] *See* James Stacey Taylor, *From Directed Donation to Kidney Sale: Does the Argument Hold Up?*, 42 J. MED. & PHIL. 597, 597 (2017) ("In 2014, Howard Broadman, then aged [sixty-four], wanted to help his grandson, Quinn Gerlach, who had been born with only one (partially functioning) kidney"); Veale et al., *supra* note 6, at 2116 (describing Quinn's kidney condition); Fischer, *supra* note 7 (explaining Broadman's purpose for setting up kidney voucher program).

[9] *See also* Veale et al., *supra* note 6, at 2116. *See also* Jeffrey Veale, Opinion, *Give a Kidney, Get a Kidney*, WALL ST. J. (Aug. 3, 2016, 7:06 PM), https://www.wsj.com/articles/give-a-kidney-get-a-kidney-1470265583 (discussing UCLA kidney voucher program).

[10] *See* Anji E. Wall, Jeffrey L. Veale & Marc L. Melcher, *Advanced Donation Programs and Deceased Donor-Initiated Chains—2 Innovations in Kidney Paired Donation*, 101 TRANSPLANTATION 2818, 2821 (2017) ("If it were not for the voucher program, the grandfather would likely have become ineligible to be a living kidney donor with advancing age.").

("KPD")] organization, [works with more than] 70 [transplant] centers, and has facilitated over 2000 transplants."[11] Under the program, the kidney donor receives a voucher that gives the recipient priority for a live donor kidney at the end of a future kidney chain.[12]

This voucher program is the latest innovation in the NKR's advance donation programs ("ADP").[13] These programs all allow donors to donate before their intended recipients receive a transplant, but the voucher program is the only ADP program where the intended recipient does not need a kidney when the donation takes place.[14] For the voucher program to be a success, potential donors must trust that the NKR will honor its commitments.[15] Indeed, the voucher program requires an unusually high level of trust because the donors are undertaking the risk and pain of major surgery in return for a promise that their loved ones will receive live donor kidneys years or even decades into the future.[16] Viewing the voucher as a binding contract that can be enforced by the courts,

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[11] Veale et al., *supra* note 6, at 2118; *see also* Stuart M. Flechner, et al., *The Incorporation of an Advanced Donation Program into Kidney Paired Exchange: Initial Experience of the National Kidney Registry*, 15 AM. J. TRANSPLANTATION 2712, 2713 (2015) ("The National Kidney Registry (NKR) is a voluntary network of [sixty-five] transplant centers in [twenty-eight] states."); Ross, Rodrigue & Veatch, *supra* note 4, at 520 ("In 2007, Garet Hil created the [NKR], a private not-for-profit organization developed to facilitate exchanges.").

[12] *See* Veale et al., *supra* note 6, at 2116 ("When a voucher is redeemed, a future chain of transplantation will end by providing the voucher recipient with a compatible kidney."); *infra* note 18 and accompanying text (describing kidney chains).

[13] *See* Sally Satel, *Vouchers and Incentives Can Increase Kidney Donations and Save Lives*, STAT NEWS (Sept. 13, 2016), https://www.statnews.com/2016/09/13/kidney-donations-transplant-vouchers-incentives ("The concept [of vouchers] has . . . been adopted at [several] medical centers and has been formalized under the umbrella of the private [NKR's] advanced donation program."); *see also* Wall, Veale & Melcher, *supra* note 10, at 2821 ("[The NKR] is currently the only kidney exchange consortium offering [ADP].").

[14] *See generally*, Wall, Veale & Melcher, *supra* note 10, at 2821 ("What sets [voucher] donation apart is that the voucher recipient is not yet in need of a kidney and may never need a kidney.").

[15] *See* Mark J. Cherry, *Organ Vouchers and Barter Markets: Saving Lives, Reducing Suffering, and Trading in Human Organs*, 42 J. MED. & PHIL. 503, 509 (2017) ("The long-term success of organ vouchers relies decisively on the ability and willingness of participating transplantation centers to fulfill their contractual obligations.").

[16] *See id.* at 510 ("The voucher program seems to require an especially high level of trust [because] [y]ears or even decades might go by before an intended recipient would receive a kidney.").

if necessary, would help engender this trust.[17] But some legal and policy concerns remain regarding whether voucher agreements should be considered binding contracts.[18]

This article will address whether a voucher agreement violates the National Organ Transplant Act's prohibition on trading organs for valuable consideration because the donor's kidney is traded for a voucher entitling the voucher holder to priority for a future live donor kidney. The article will also address whether the voucher should be considered an enforceable contract even though live donors can withdraw from an agreement to donate up until the time of the donation and the NKR does not guarantee that the voucher recipient will ever receive a kidney. In addition, the article will discuss the important policy concerns related to considering a voucher a contract.

I. BACKGROUND

A voucher entitles the recipient to receive a kidney at the end of a future kidney chain.[19] An introduction to kidney chains and vouchers follows to provide the background necessary to fully understand the voucher program.

A. Kidney Chains

Kidney chains are included within the category of kidney exchanges, which are essentially programs that allow incompatible donor/recipient pairs to trade kidneys with other incompatible pairs.[20] Approximately thirty-five percent of prospective donors are

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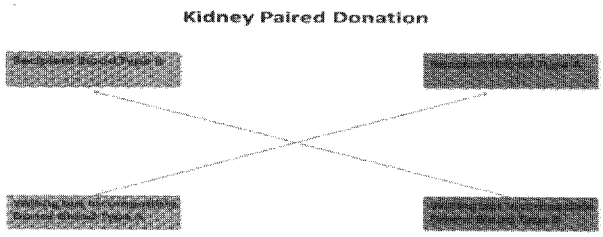
[17] *See id.* ("If too many voucher holders fail to receive the promised transplant, this will directly undermine trust in the system.").
[18] *See id.* ("Only time will tell . . . if courts will be willing to enforce their contractual obligations, should [participating transplant centers] refuse to do so.").
[19] *See* Wall, Veale & Melcher, *supra* note 10, at 2821.
[20] *See generally*, Evelyn M. Tenenbaum, *Bartering for a Compatible Kidney Using Your Incompatible, Live Kidney Donor: Legal and Ethical Issues Related to Kidney Chains*, 42 AM. J.L. & MED. 129, 145-53 (2016).

incompatible with their intended recipients.[21] The first kidney exchange in the United States was a kidney paired donation ("KPD") performed in the year 2000.[22]

i. Kidney Paired Donation

Using KPD, two recipients who would otherwise be relegated to the deceased donor waiting list ("DDWL"), can instead receive a live donor transplant.[23] For example, suppose Recipient One has blood type A and a willing, but incompatible, donor with blood type B. Recipient Two has blood type B and a willing, but incompatible, donor with blood type A. In KPD, Recipient One's donor would donate to Recipient Two and Recipient Two's donor would donate to Recipient One.[24]



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[21] Veale et al., *supra* note 6, at 2115; *see also* Kristiaan M. Glorie et al., *Coordinating Unspecified Living Kidney Donation and Transplantation Across the Blood-Type Barrier in Kidney Exchange*, 96 TRANSPLANTATION 814, 814 (2013) ("[M]ore than [thirty percent] of living [kidney] donors are incompatible with their intended recipient.").

[22] *See also* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 519 ("[T]he first kidney exchange in the United States was not carried out until 2000 at Rhode Island Hospital."); C. Bradley Wallis, et al., *Kidney Paired Donation*, 26 NEPHROLOGY DIALYSIS TRANSPLANTATION 2091, 2091 (2011).

[23] *See* Robert A. Montgomery, *Renal Transplantation Across HLA and ABO Antibody Barriers: Integrating Paired Donation into Desensitization Protocols*, 10 AM. J. TRANSPLANTATION 449, 452 (2010) ("[Kidney Paired Donation] involves matching a potential kidney recipient who has a willing but incompatible donor to another incompatible pair.").

[24] *See* Dorry L. Segev et al., *Utilization and Outcomes of Kidney Paired Donation in the United States*, 86 TRANSPLANTATION 502, 502 (2008) ("[K]idney paired donation . . . allows pairs of recipients and their willing but incompatible live donors to find reciprocal matches and undergo transplantation by exchanging donors."); *see also* Francis L. Delmonico et al., *Donor Kidney Exchanges*, 4 AM. J. TRANSPLANTATION 1628, 1628 (2004).

[25] Evelyn M. Tenenbaum, *Swaps and Chains and Vouchers, Oh My!: Evaluating How Saving More Lives Impacts the Equitable Allocation of Live Donor Kidneys*, 44 AM. J.L. & MED. (forthcoming 2018).

This example of how KPD operates is simplified in two major ways. First, in this example, only blood type was used to determine incompatibility. However, to be compatible, a donor must be blood type (ABO) and human leukocyte antigen ("HLA") compatible.[26] Due to advances in immunosuppressive drugs, transplants can now be successful even if the donor and recipient are not HLA compatible, unless the recipient is pre-sensitized.[27] "A pre-sensitized patient's immune system has already created antibodies to attack [specific] HLA antigens producing a greater risk of graft rejection and organ failure [if the donor's blood contains those antigens]."[28] Indeed, if the recipient's blood has antibodies likely to attack a donor's kidney, the donor/recipient pair is said to have a positive crossmatch and that will often preclude an organ transplant.[29] "[Pre-sensitization] occurs primarily *via* three types of exposure (listed here by increasing

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[26] *See* Michael T. Morley, Note, *Increasing the Supply of Organs for Transplantation Through Paired Organ Exchanges*, 21 YALE L. & POL'Y REV. 221, 227 (2003) ("For a kidney to be histocompatible with a potential recipient, only two sets of antigens must match—ABO and [HLA].").

[27] Stephen Sheldon & Kay Poulton, *HLA Typing and Its Influence on Organ Transplantation*, *in* TRANSPLANTATION IMMUNOLOGY: METHODS AND PROTOCOLS 157, 166 (Philip Hornick & Marlene Rose eds., 1st ed. 2006) ("If sensitization to any HLA specificities is identified, these can be highlighted as 'unacceptable antigens' and avoided as mismatches with any potential donor.").

[28] Tenenbaum, *supra* note 20, at 140; *see also* Douglas S. Keith & Gayle M. Vranic, *Approach to the Highly Sensitized Kidney Transplant Candidate*, 11 CLINICAL J. AM. SOCIETY NEPHROLOGY 684, 691 (2016) ("Recipients with high levels of sensitization to their donor are at higher risk of rejection, require more immunosuppression, and have less optimal allograft outcomes.").

[29] *See* Alvin E. Roth, Tayfun Sönmez & M. Utku Ünver, *Kidney Exchange*, 119 Q.J. ECON. 457, 461 (2004) ("Prior to transplantation, the potential recipient is tested for the presence of preformed antibodies against HLA in the donor kidney. The presence of [such] antibodies, called a *positive crossmatch*, effectively rules out transplantation."); *see also* Keith & Vranic, *supra* note 28, at 689 ("The disadvantages [of desensitization] are many, including higher cost, increased risk of infections and complications related to the higher intensity of immunosuppression, and known inferior outcomes for both the patient and the transplanted organ."); Tenenbaum, *supra* note 20, at 141 (explaining that some hospitals use desensitizing procedures to deal with positive cross matches and incompatible blood types, but these techniques are expensive, labor intensive, and less effective than finding compatible donors).

sensitizing potential): blood transfusions, pregnancy, and solid organ transplant,"[30] all of which will cause the body to produce significant antibodies.[31]

Second, in the KPD example illustrated above, there is only a two-way exchange of kidneys. However, KPD can involve more than two pairs. In the past, KPD exchanges have involved as many as six donors and six recipients.[32]

Kidney Paired Donation has been very successful in increasing live donor transplants,[33] but two characteristics of KPD limit the number of transplants that can be performed under this program. First, the transplants have to be reciprocal.[34] In other words, not only does Recipient One's donor have to be a match for Recipient Two, but Recipient Two's donor also has to be a match for Recipient One. This requirement limits the number of hard-to-match pairs that can be included in a KPD exchange.[35]

Second, the transplants are performed simultaneously to prevent a donor from reneging.[36] Because the transplants are performed simultaneously, the number of pairs

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[30] Keith & Vranic, *supra* note 28, at 684 (noting also that other causes of sensitization are "rare"); *see also* Sheldon & Poulton, *supra* note 27, at 166 ("Following a poorly matched kidney transplant, a patient can become highly sensitized, developing antibodies reactive with more than [fifty percent] of the donor population.").

[31] Kevin Sack, *60 Lives, 30 Kidneys, All Linked*, N.Y. TIMES (Feb. 18, 2012), http://www.nytimes.com/2012/02/19/health/lives-forever-linked-through-kidney-transplant-chain-124.html ("Some, because of previous transplants, blood transfusions or pregnancies, may have developed antibodies that make them highly likely to reject a new kidney.").

[32] Sommer E. Gentry, Robert A. Montgomery & Dorry L. Segev, *Kidney Paired Donation: Fundamentals, Limitations, and Expansions,* 57 AM. J. KIDNEY DISEASES 144, 146 (2011) (noting that the largest KPD included six donors and six recipients).

[33] *See id.* at 145 ("As a result [of KPD], many hundreds of transplants have resulted . . . , and KPD programs are active in many countries: the Netherlands, Korea, Canada, the United Kingdom, and Romania.").

[34] *See id.* at 146 (noting that the limitations of KPD include the "reciprocal match requirements").

[35] *See id.* (noting that eliminating the reciprocal matching requirement is "particularly beneficial for pairs with difficult-to-match donors, as well as difficult-to-match recipients").

[36] Michael A. Rees et al., *A Nonsimultaneous, Extended, Altruistic-Donor Chain*, 360 NEW ENGLAND J. MED. 1096, 1096 (2009) ("[Paired donations are performed simultaneously to prevent the possibility that] after one donor has given a kidney to the other pair's recipient, that recipient's coregistered donor will fail to donate a kidney in return.").

that can participate is limited by the number of operating rooms and transplant surgeons who are available in one location at any one time.[37]

ii. Non-Simultaneous, Extended, Altruistic, Donor Chains

To deal with these problems, transplant centers began using non-simultaneous, extended, altruistic, donor ("NEAD") chains. These chains start with a non-directed donor ("NDD"), also known as an altruistic or Good Samaritan donor.[38] An NDD wants to help a patient by donating a kidney, but does not have a particular recipient in mind.[39] The NDD is given the choice of either donating to someone at the top of the DDWL or starting a kidney chain.[40]

If the NDD chooses to start a kidney chain, he or she will donate to Recipient A, but only if Recipient A has an incompatible donor (Donor A) willing to donate to Recipient B. Recipient B, in turn, will only receive Donor A's kidney if Recipient B has an incompatible donor (Donor B) willing to donate to Recipient C, and so forth.[41]

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[37] *See* Itai Ashlagi et al., *Nonsimultaneous Chains and Dominos in Kidney—Paired Donation—Revisited,* 11 AM. J. TRANSPLANTATION 984, 984 (2011) (noting that simultaneous operations require assembling enough "operating rooms and surgical teams" to perform them).

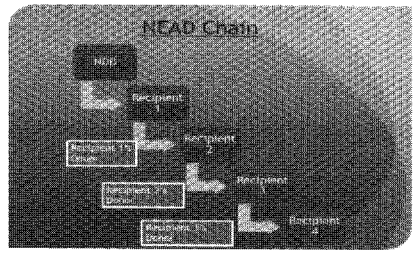
[38] *See* Sommer E. Gentry et al., *Kidney Paired Donation: Fundamentals, Limitations, and Expansions*, 57 AM. J. KIDNEY DISEASES 144, 146 (2011).

[39] *See* Patricia L. Adams et al., *The Nondirected Live-Kidney Donor: Ethical Considerations and Practice Guidelines*, 74 TRANSPLANTATION 582, 583 (2002) ("[T]he NDD volunteers to donate an organ for a recipient that he or she does not know or select."); Mary Ellen Olbrisch et al., *Psychosocial Assessment of Living Organ Donors: Clinical and Ethical Considerations*, 11 PROGRESS TRANSPLANTATION 40, 41–42 (2001) ("[An NDD] is someone who wishes to donate an organ to be used by any recipient who needs it, without knowledge of the recipient's need or distress. Most blood donors are [NDDs].").

[40] *See* Marc L. Melcher et al., *Kidney Transplant Chains Amplify Benefit of Nondirected Donors*, 148 JAMA SURGERY 165, 166 (2013) ("Typically, an NDD would present to a transplant center wanting to altruistically donate a kidney to a compatible patient at the top of the DDWL who did not have the benefit of a living donor."); Wallis, et al., *supra* note 22, at 2094 ("While many programs choose to allocate [NDD] kidneys to the [DDWL], others seek to multiply the gift [by having them initiate a chain of transplants.").

[41] *See* Glorie et al., *supra* note 21, at 815 (explaining what an altruistic donor chain is and its complexity).

Since the NEAD chain is started by an NDD, there is no need for reciprocal matching; Donor A only has to match with Recipient B, the next recipient on the chain.[42] Avoiding the need for reciprocity increases the number of possible matches and allows more hard-to-match recipients to be included.[43]



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The transplants also do not all have to be performed simultaneously. Because the NEAD chain is started with an NDD, after a segment of transplants is arranged, there will be an extra donor left over.[45] This extra donor is called a bridge donor and can be used to start a new segment of donations.[46] The segments build on each other and because there is no need for simultaneity, the transplants can "take place at different locations and at different times, thereby increasing the number [of recipients who] can be

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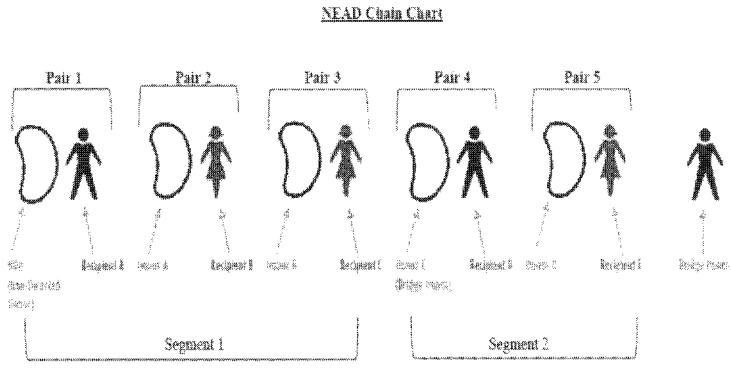
[42] *See* Wallis, et al., *supra* note 22, at 2095 ("NEAD chains . . . bypass the need for reciprocal matching, providing higher quality matches to participants and allowing more pairs to profit.").
[43] Marc L. Melcher et al., *Letter to the Editor: We Need to Take the Next Step*, 16 AM. J. TRANSPLANTATION 3581, 3581 (2016) (stating that NEAD chains are important, as they lead to more transplants). "Nondirected [living donors] are so important because they can start NEAD chains that lead to more transplants for blood type O and highly sensitized patients." *Id*
[44] Evelyn M. Tenenbaum, *Bartering for a Compatible Kidney Using Your Incompatible, Live Kidney Donor: Legal and Ethical Issues Related to Kidney Chains*, 42 AM. J. L. & MED. 129, 148 (2016).
[45] *See* Ashlagi et al., *supra* note 37, at 985 (explaining the NEAD chain and how it avoided the need for reciprocal matching). "[T]he NDD initiates a [NEAD] chain consisting of several segments." *Id.* "Each segment is a short simultaneous chain, where the last donor of each segment becomes a bridge donor." *Id.*
[46] *See id.* ("[Bridge donors can] further extend[] the [NEAD] chain to as yet unidentified patients"); Gentry, Montgomery & Segev, *supra* note 32, at 147 (noting that waiting donors in a NEAD chain are "referred to as bridge donors").

part of a single chain."[47] Theoretically, NEAD chains can be extended indefinitely.[48] The largest NEAD chain to date consisted of thirty-four donors and thirty-four recipients.[49]



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"A NEAD chain [generally] ends when a bridge donor reneges on the promise to donate or is no longer eligible to donate due to a difficult-to-match blood type, medical, or other concerns."[51] Experience has shown that bridge donors are less likely to donate if there is a long wait before another segment of the chain can be arranged because the donor may have intervening obligations or health concerns.[52] To avoid this problem, the

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[47] Tenenbaum, *supra* note 20, at 150 (making organ donations efficient by allowing transplants to take place at different times and locations).

[48] *See* Ashlagi et al., *supra* note 37, at 985 ("[Bridge donors can] further extend[] the [NEAD] chain to as yet unidentified patients.").

[49] Byron Pitt et al., *Donating a Kidney to a Complete Stranger in Order to Save a Loved One*, ABC NEWS (Apr. 14, 2015), http://abcnews.go.com/Health/donating-kidney-complete-stranger-order-save-loved/story?id=30288400 ("[T]he nation's longest multi-hospital kidney transplant chain" included "34 kidneys [which] have been swapped between 26 different hospitals over the course of three months.").

[50] Tenenbaum, *supra* note 44, at 150.

[51] Tenenbaum, *supra* note 20, at 149–50; *see also* David E. Fumo et al., *Historical Matching Strategies in Kidney Paired Donation: The 7-Year Evolution of a Web-Based Virtual Matching System*, 15 AM. J. TRANSPLANTATION 2646, 2647 (2015).

[52] *See also* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 518 ("[B]ridge donors are . . . likely to drop out for many reasons, including, for example, their own health issues or the difficulty in donating due to other competing obligations."); Rhonda L. Rundle, *A Daisy Chain of Kidney Donations*, WALL ST. J. (Sept. 23, 2008 12:01 AM), https://www.wsj.com/articles/SB122212713014365289 ("In [NEAD chains] there's an increased chance that a would-be donor might be injured or get sick or otherwise be prevented from donating."); E. Steve Woodle et al., *Ethical Considerations for Participation of Nondirected Living Donors in Kidney Exchange Programs*, 10 AM. J. TRANSPLANTATION 1460, 1465 (2010) ("The substantial waiting periods that [bridge donors] will face may increase the likelihood of backing out.").

bridge donor may be asked to donate to the DDWL if a long wait is anticipated.[53] A donation to the DDWL ends the NEAD chain because there is no longer a bridge donor who can start the next segment of the chain.[54]

The NKR reports having facilitated hundreds of chain-ending live donations to the DDWL.[55] The average length of a NEAD chain is currently approximately 4.8 recipients.[56] This means that a single NDD can facilitate approximately five transplants that otherwise would not have taken place.

Several organizations, including the NKR and the Alliance for Paired Donation, administer kidney exchanges.[57] "These organizations use [complex mathematical modeling, called] 'optimization algorithms[,]' to find the best set of matches from the available pool of donors and co-registered recipients."[58] Although each organization develops its own specific priorities, generally, the goal of the optimization algorithm is to

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[53] *See* Tenenbaum, *supra* note 20, at 151; *see also* Gentry, Montgomery & Segev, *supra* note 32, at 147 ("If during a long waiting period some of these bridge donors withdraw or become medically ineligible to donate, the bridge donor's potential contribution will be lost.").

[54] Gentry, Montgomery & Segev, *supra* note 32, at 145 fig.1 (describing a NEAD chain that ends with a donation to the DDWL, also known as a "closed chain").

[55] *See, e.g.*, Marc L. Melcher et al., *Utilization of Deceased Donor Kidneys to Initiate Living Donor Chains*, 16 AM. J. TRANSPLANTATION 1367, 1368 (2016) ("[M]ost chains end with the transplantation of a waitlisted candidate who may not have a compatible potential [living donor].").

[56] Wall, Veale & Melcher, *supra* note 10, at 2820; *see also* Marc L. Melcher et al., *supra* note 40, at 165 ("[Nondirected Donors] trigger almost 5 transplants on average, more if the NDD is blood type O.").

[57] *See Paired Donation Networks*, KIDNEY LINK, http://www.kidneylink.org/PairedDonationPrograms.aspx (last visited Mar. 25, 2018) (listing several organizations and their contact information); *see generally* ALLIANCE FOR PAIRED KIDNEY DONATION, https://paireddonation.org/ (last visited Mar. 25, 2018) (containing information about their KPD programs); NAT'L KIDNEY REGISTRY, http://www.kidneyregistry.org (last visited Mar. 25, 2018) (containing information about their KPD, Domino Paired Donation, and NEAD chain programs).

[58] Tenenbaum, *supra* note 20, at 152; *see also also* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 523 ("Optimizing chain lengths . . . is a balance between the length of a chain with capturing hard-to-match pairs, patient sense of urgency, and many logistical issues."); Gentry, Montgomery & Segev, *supra* note 32, at 149 ("The best algorithms, known as optimization algorithms, guarantee that no better set of matches could have been found.").

develop chains that include the greatest number of recipients, while also including difficult-to-match pairs.[59]

B. Vouchers

Howard Broadman wanted to donate a kidney in return for a voucher to solve what has become known as 'chronological incompatibility.'[60] In other words, he had to donate earlier than his intended recipient needed a kidney. But voucher donations were also intended to solve an even bigger concern—the shortage of NDDs.[61] Howard Broadman, and others in the kidney voucher program, use their donations to start kidney chains and, in this manner, are essentially acting as NDDs "because they do not add a paired recipient to the current chain."[62] Indeed, the main value of kidney vouchers is their potential to significantly increase the number of kidney chains thereby leveraging the voucher donation to help make maximum use of willing, but incompatible, live donors.[63]

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[59] *See also* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 520 ("The NKR algorithm has evolved over time. It considers many factors, including optimizing for blood type, histocompatibility, age considerations, travel restrictions, and other donor/recipient preferences."); Gentry, Montgomery & Segev, *supra* note 32, at 149 ("Depending on the priorities of the program, a better set of matches might be one in which more recipients underwent transplant or, alternatively, one in which the same number of recipients were matched, but with more highly sensitized recipients."); *Info for Centers*, NAT'L KIDNEY REGISTRY, https://www.kidneyregistry.org/transplant_center.php (last visited Mar. 25, 2018) ("[M]atch offers shall be selected to facilitate the most possible transplants except when difficult to match pairs can be matched").

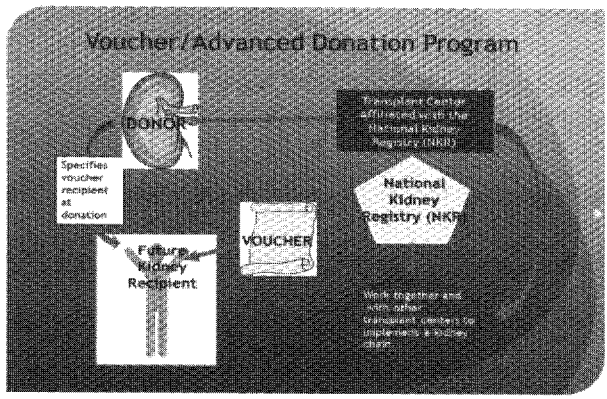
[60] Julian J. Koplin, *The Body as Gift, Commodity, or Something in Between: Ethical Implications of Advanced Kidney Donation*, 42 J. MED. & PHIL. 575, 590 (2017) (explaining that advanced donation facilitates transplants "when logistical issues prevent the donor from donating directly to the intended recipient . . . [or, in other words] where the donor and intended recipient are 'chronologically incompatible'").

[61] *See* Marc L. Melcher et al., *Utilization of Deceased Donor Kidneys to Initiate Living Donor Chains*, 16 AM. J. TRANSPLANTATION 1367, 1367 (2016) ("Currently the number of [kidney] chains is limited by the number of chain-initiating kidneys (CIKs) from [NDDs]."); Melcher et al., *supra* note 43, at 3581 ("Nondirected [living donors] are so important because they can start NEAD chains that lead to more transplants for blood type O and highly sensitized patients."); Wall, Veale & Melcher, *supra* note 10, at 2818 (noting that the advanced donation programs were part of a "strategy . . . to increase the number of chain-initiating kidneys").

[62] Veale et al., *supra* note 6, at 2117.

[63] *See* Flechner, et al., *supra* note 11, at 2713 ("The role of the [Advanced Donation Program donor, including voucher donors] is optimized to facilitate the maximal number of transplants."); Wall, Veale & Melcher, *supra* note 10, at 2823 ("[T]he number of kidney chains is limited by the

The first three donors in the voucher program each started kidney chains that resulted in a total of twenty-five transplants.[64] However, the question remains whether vouchers constitute a binding commitment on the part of the NKR.[65]



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II. THE VOUCHER PROGRAM DOES NOT CONSTITUTE A TRANSFER OF VALUABLE CONSIDERATION PROHIBITED UNDER THE NATIONAL ORGAN TRANSPLANT ACT

The first major concern is whether the voucher program violates the National Organ Transplant Act ("NOTA"), which would make voucher agreements unenforceable.[67] The National Organ Transplant Act expressly prohibits trading organs for valuable consideration. The Act provides, "[i]t shall be unlawful for any person to knowingly acquire, receive or otherwise transfer any human organ for valuable

availability of [NDDs]."); Veale et al., *supra* note 6, at 2117 ("[V]oucher[donors] could substantially increase the number of KPD chains and thus remove patients from the [DDWL].").

[64] *See* Veale et al., *supra* note 6, at 2116–117 (noting that Broadman initiated a chain of three transplants, the second voucher donor initiated a chain of 8 transplants, and the third donor initiated a chain of 14 transplants).

[65] *See* Cherry, *supra* note 15, at 510 ("Only time will tell . . . if courts will be willing to enforce their contractual obligations, should [participating transplant centers] refuse to do so.").

[66] Tenenbaum, *supra* note 25.

[67] *See* National Organ Transplant Act of 1986, 42 U.S.C. § 274e(a) (2017).

consideration for use in human transplantation."[68] The voucher program arguably violates this provision because the donor's kidney is exchanged for a voucher promising the recipient priority for a future live donor kidney, which certainly can be considered valuable consideration.[69]

A. Kidney Paired Donation and Kidney Exchanges Do Not Violate NOTA

Kidney paired donation and kidney chains also arguably violated NOTA's prohibition on trading organs for valuable consideration because the incompatible donor is exchanging a kidney for the valuable consideration of a compatible kidney for his or her loved one.[70] In fact, many transplant centers initially refused to perform KPD because they were concerned that KPD violated the Act.[71] To remedy this problem, Congress passed the Charlie W. Norwood Living Donation Act ("Norwood Act") in 2007.[72] The Norwood Act amended NOTA to clarify that the Act's "prohibition against the exchange of valuable consideration for human organs does not extend to [KPD]."[73]

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[68] 42 U.S.C. § 274e(a).

[69] *See* Julian J. Koplin, *The Body as Gift, Commodity, or Something in Between: Ethical Implications of Advanced Kidney Donation*, 42 J. MED. & PHIL. 575, 578 (2017) ("[The voucher program] opens up a new way of trading kidneys (i.e., not only as a 'pure' gift but also in exchange for having a loved one receiv[e] increased priority for a future kidney.").

[70] *See* Morley, *supra* note 26, at 246 ("[B]ecause a donor in a paired organ exchange trades his organ for a compatible organ for his loved one, some may argue that the donor receives 'valuable consideration.'").

[71] *See* 153 CONG. REC. 5437 (2007) (statement by Rep. Inslee) ("[C]linical efforts in the direction of paired donation have been severely hampered by concerns over the legal status of such activity."); 153 CONG. REC. 18209 (2007) (statement of Sen. Levin) ("[NOTA's prohibition on transfers of organs for valuable consideration] has been interpreted by a number of transplant centers to prohibit [KPD].").

[72] *See* Charlie W. Norwood Living Organ Donation Act, 42 U.S.C. § 274e (2017) The Act was named after Representative Charlie W. Norwood to honor him after his death on July 9, 2007, for his strong support of organ transplantation. *See* 153 CONG. REC. 33289 (2007).

[73] Kieran Healy & Kimberly D. Krawiec, *Custom, Contract, and Kidney Exchange*, 62 DUKE L.J. 645, 661 (2012); *see also* National Organ Transplant Act of 1986, 42 U.S.C. § 274e(a) (2017) (The amendment directly follows NOTA's prohibition on trading organs for valuable consideration and states: "The preceding sentence does not apply with respect to human organ paired donation"); Gentry, Montgomery & Segev, *supra* note 32, at 148 ("Uncertainty about whether

Kidney chains were not included in this amendment, probably because they were "a new and rare method [of donation] at that time."[74] But Congress's reasons for excluding KPD from NOTA's prohibition on trading organs for valuable consideration apply with equal force to NEAD chains.[75] Kidney Paired Donation was exempted for two major reasons. First, Congress considered live donation to be "the gift of life," rather than a commercial transaction.[76] For example, Representative Linder stated, "[l]et me be clear: [KPD] does not constitute the buying and selling of organs. If we believe as much, then we accept that the gift of life has monetary value."[77] Second, the intent behind KPD was characterized as being similar to direct donation to a family member. As Representative Dingell stated, "[KPD] is a way to solve the dilemma faced by people who want to become living organ donors for a family member or friend, but are unable to do so because they are biologically incompatible."[78] KPD gives these incompatible donors the means to accomplish the same purpose as traditional direct donation; the donor can donate a kidney so his or her family member or friend can receive one in return.[79]

For these same reasons, NEAD chains have also been considered exempt from NOTA's prohibition on trading organs for valuable consideration. As with KPD, incompatible donors in NEAD chains are giving their kidneys—"the gift of life"—

KPD constituted valuable consideration persisted until the US Congress passed legislation explicitly exempting KPD from NOTA in 2007.").

[74] Healy & Krawiec, *supra* note 73, at 661.

[75] For a more detailed explanation of why kidney chains do not violate Congress's prohibition on trading organs for valuable consideration, *see* Tenenbaum, *supra* note 20, at 161–169.

[76] *See* J. Randall Boyer, *Gifts of the Heart . . . and Other Tissues: Legalizing the Sale of Human Organs and Tissues*, 2012 BYU L. REV. 313, 327, 330 (2012) ("[E]very country in the world, with the exception of two, has laws that prohibit the sale of human organs").

[77] 153 CONG. REC. 5440 (2007) (statement of Rep. Linder) ("[Paired organ donation is a] critically important vehicle for giving the gift of life to others.").

[78] 153 CONG. REC. 5439 (2007) (statement of Rep. Dingell); *see* 153 CONG. REC. 5437 (statement of Rep. Norwood) ("[Kidney Paired Donation helps] those who want to give a kidney to a loved one [but] feel they cannot help because they are not biologically compatible with the patient in need.").

[79] *See* CONG. REC. 5440 (2007) (statement of Rep. Gingrey).

without monetary compensation, so their loved ones can receive a compatible live donor kidney.[80] Since these characteristics of KPD led Congress to exempt KPD from the prohibition in NOTA, NEAD chains should also be excluded.[81]

B. Kidney Vouchers Also Do Not Violate NOTA

Kidney vouchers go a step further than KPD and NEAD chains in commodifying kidney donation.[82] In the voucher program; "the exchange is asynchronous;"[83] the kidney is given in return for a voucher than can be redeemed as long as twenty or more years into the future.[84] Thus, like money, the voucher acts as a place-holder, allowing the voucher recipient to use it to obtain a live donor kidney at the optimal time.[85]

The voucher also has other features that make it similar to a market transaction. The voucher is arguably a contractual arrangement, including a consent to donate in return for a voucher entitling the voucher recipient to priority for a future live donor kidney.[86] This type of arrangement can be seen as an investment in the future, with the donor taking a calculated risk that the investment will pan out.[87]

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[80] *See* Tenenbaum, *supra* note 20, at 168.
[81] *See id.*
[82] *See* Cherry, *supra* note 15, at 512 ("The practice of issuing a voucher that can be traded in for a functional human kidney for transplantation at some point in the future is just one more step along the continuum toward a full-fledged market in human organs for transplantation.").
[83] *Id.* at 511.
[84] *See Voucher Program*, NAT'L KIDNEY REGISTRY, http://www.kidneyregistry.org/info/voucher-program (last visited Mar. 25, 2018) ("Some Voucher donors have donated 20+ years before their intended recipient is expected to need a transplant."); *see also* Veale et al., *supra* note 6, at 2116.
[85] *See* Cherry, *supra* note 15, at 512. "[M]uch like cash, vouchers permit the interchange of objects of value (in this case kidneys) to be separated by time, even years or decades." *Id.*
[86] *See* Koplin, *supra* note 69, at 577. "[Advanced Donation Programs] incorporate . . . a contractual agreement in the form of consents to donate and receive a transplant." *Id.*
[87] *See id.* ("[Advanced Donation Programs] rely . . . on a present investment (in the form of a healthy kidney) . . . leaving th[e] donors potentially vulnerable to non-performance."). With NEAD chains, the donor does not donate until after his or her co-registered recipient has already received a kidney, so this vulnerability to non-performance does not exist. *Id.*; *see* Ashlagi et al., *supra* note 37, at 984; Wenhao Liu, Kimberly D. Krawiec & Marc L. Melcher, *Is Informed Consent*

Even the term voucher indicates that it involves a business transaction. The Merriam Webster definitions of "voucher" include, "a form or check indicating a credit against future purchases or expenditures" and "a documentary record of a business transaction."[88] The kidney voucher has likewise been referred to as "a gift certificate" and "a layaway plan," terms which similarly connote some type of commercial transaction.[89]

To deal with concerns that the voucher program might be considered an unlawful commodification of human organs that violates NOTA, the program includes strict restrictions. Under the voucher program, the donor must name his or her intended voucher recipient[90] and that recipient "must be a kidney transplant recipient or currently have, or be expected to have, some form of renal function impairment."[91] Once the donation takes place, the voucher recipient cannot be changed and no new recipients can be added.[92] "The intended recipient may only redeem the voucher when transplantation

Enough?, 16 AM. J. TRANSPLANTATION 1038, 1038 (2016) ("With a renege, no person in the chain is harmed . . . In contrast, ADP places individual patients at risk.").

[88] *Voucher*, MERRIAM-WEBSTER DICTIONARY, https://www.merriam-webster.com/dictionary/voucher (last visited Mar. 25, 2018).

[89] *See* Koplin, *supra* note 69, at 577.

[90] *See Voucher Program*, *supra* note 84. Since the voucher program is so new, there appears to be some confusion about whether the program allows the donor to select one voucher recipient or up to five. *See id.* For example, the NKR's website specifies that the donor can select one recipient. *Id.* But the NKR's consent form appears to allow the voucher donor to select five recipients. *See* NAT'L KIDNEY REGISTRY, ADVANCED DONATION PROGRAM: INFORMED CONSENT (2018), *available at* http://www.kidneyregistry.org/docs/ADP_Consents.pdf (last visited Apr. 14, 2018). "When an ADP Donor has multiple Intended Recipients, the first appropriate candidate for transplant will get the ADP kidney." *Id.*

[91] *Voucher Program*, *supra* note 84; *see also* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 526.

[92] *See* Kerstein, *supra* note 3, at 561 ("The donor cannot withdraw a voucher from an intended recipient once he has donated."); Dominique E. Martin & Gabriel M. Danovitch, *Banking on Living Kidney Donors—A New Way to Facilitate Donation Without Compromising on Ethical Values*, 42 J. MED. & PHIL. 537, 541 (2017) ("Additional beneficiaries cannot be added later, and vouchers cannot be withdrawn, are non-transferable, and expire on the death of the intended recipient.").

is indicated"[93] and both the donor and recipient are expressly prohibited from transferring the voucher, even if the named recipient dies before the voucher is used.[94]

Strict precautions are also in place to ensure that the recipient who redeems the voucher is the same recipient who was selected by the donor at the time of the donation.[95] The recipient's HLA and blood type are retained along with a government-issued photo identification so the recipient can be positively identified before receiving the transplant.[96]

These restrictions assure that neither the donor nor the recipient can use the voucher in a commercial transaction; the voucher is nontransferable and so cannot be bought by someone desperate for a kidney or traded for material goods.[97] The additional voucher restrictions include requiring that the recipient be someone who is likely to need a kidney in the foreseeable future and that the recipient provide a blood sample and photo ID.[98] The first requirement provides extra protection against paid exchanges because voucher recipients with kidney disease are unlikely to trade kidney vouchers they will need

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[93] *Voucher Program*, *supra* note 84.

[94] *See* Kerstein, *supra* note 3, at 561 ("If the intended recipient . . . die[s] before receiving a transplant, the voucher expires; it is not transferable to someone else."); Martin & Danovitch, *supra* note 92, at 541.

[95] *See* Fischer, *supra* note 7.

[96] *See id.* ("To make sure the recipient is who they say they are, doctors complete [HLA] typing and record the recipient's blood type."); *Voucher Program*, *supra* note 84 ("The intended recipient is required to provide government photo identification and a blood sample so that the HLA and blood type can be confirmed before a Voucher' [sic] can be redeemed.").

[97] *See* Cherry, *supra* note 15, at 513 ("Recipients might otherwise, for example, transfer [kidney vouchers] to another transplant candidate in return for payment or other material benefit, thus effectively violating laws prohibiting trade in organs and failing to respect the wishes of the donor."); Martin & Danovitch, *supra* note 92, at 545 ("The requirement to designate beneficiaries of non-transferable vouchers aims to obviate the potential for commodification of vouchers.").

[98] *See* Fischer, *supra* note 7 ("To make sure the recipient is who they say they are, doctors complete [HLA] typing and record the recipient's blood type."); *Voucher Program*, *supra* note 84 ("The intended recipient is required to provide government photo identification and a blood sample so that the HLA and blood type can be confirmed before a Voucher' [sic] can be redeemed.").

themselves. The second requirement makes it difficult, if not impossible, for intended recipients to be switched with others in need of a transplant.[99]

With these precautions in place, the voucher program should also be excluded from NOTA's prohibition on trading organs for valuable consideration. As with KPD and kidney chains, voucher donors are donating a kidney, without compensation, in order to help family members or close friends receive live donor kidneys when they need them.[100] Although voucher donations differ from kidney exchanges because the donation is made in advance of the intended recipient's transplant,[101] the motivation for the donation is the same.[102] The voucher program is best viewed as an extension of kidney exchanges,[103] and therefore exempt from NOTA, because the donors' primary motivation is to make certain their loved ones receive a compatible live donor kidney when a transplant becomes necessary.[104]

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[99] *See* Veale et al., *supra* note 6, at 2118 ("To avoid surreptitious paid exchanges, the identity of voucher recipients, who are selected prior to donor nephrectomy, must be recorded (photo identification, ABO blood group, and tissue type), to permit confirmation when vouchers are redeemed.").

[100] *See* Martin & Danovitch, *supra* note 92, at 555 ("Advanced donation [including vouchers] tap[] into existing altruistic motivations to donate a kidney . . . rather than offering any financial advantage to donors.").

[101] *See* Cherry, *supra* note 15, at 507 ("[T]he [voucher] donor may be seen as donating 'in advance' to a designated individual, who thus benefits even though currently, a transplant is not indicated.").

[102] *See* Martin & Danovitch, *supra* note 92, at 545 ("In order to minimize the risk of a commercial transaction or coercion of the donor, the same processes used to evaluate the relationship and motivations of contemporaneous donor-recipient pairs could be used to evaluate voucher donors and beneficiaries."); Koplin, *supra* note 69, at 582 ("[A]dvanced donation[, including voucher donation,] does not introduce a radically new set of possible motivations for donating one's kidney. Instead, advanced donation makes it possible for family members to provide a kidney for a loved one in contexts where they might not otherwise have been able to do so.").

[103] *See* Taylor, *supra* note 8, at 600 ("[The] voucher program is simply an extension of the established practice of kidney swaps.").

[104] *See* Martin & Danovitch, *supra* note 92, at 553 ("The vouchers offer a benefit to the recipient in the form of an increased chance of receiving a living-donor kidney for use in transplantation . . . it is not exchanged for monetary gain in any form.").

Some commentators suggest that commodification be viewed as "fall[ing] on a continuum ranging from complete commodification on one end to complete non-commodification on the other, with varying degrees of incomplete commodification falling in between."[105] Although the voucher program may fall farther on the continuum toward a market transaction than kidney exchanges,[106] donating a kidney, without compensation, for the altruistic purpose of ensuring that a loved one with kidney disease is able to receive a live donor kidney in the future is certainly much closer to non-commodification than to creating a market in kidneys.[107]

Since it appears that the NKR can enter into a binding contract with a voucher recipient without violating NOTA, the question remains whether a voucher does create a binding contract between the NKR and the donor.

III. THE VOUCHER AGREEMENT CREATES A BINDING CONTRACT

Under the voucher program, the donor accepts the NKR's offer to donate a kidney in return for a voucher giving his or her intended recipient priority for a live donor kidney at the end of a future kidney chain.[108] To gain the trust of prospective donors, this agreement should be considered binding,[109] but there are two initial concerns.

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[105] Koplin, *supra* note 69, at 576; *see also* Cherry, *supra* note 15, at 512.
[106] *See* Cherry, *supra* note 15, at 512 ("It very well may be that voucher programs treat human kidneys as a commodity for exchange, but this is not quite the same as concluding that it is appropriate to buy and sell human kidneys for financial profit.").
[107] *See* Koplin, *supra* note 69, at 576 ("[I]t seems unlikely (if not wholly implausible) that the option of donating a kidney in exchange for prioritizing a loved one in the future would encourage the view that organs should be conceived of as market commodities rather than gifts."). Julian Koplin's article also explains why the voucher program does not create the same concerns as commercial buying and selling of kidneys. *Id.*
[108] Veale et al., *supra* note 6, at 2115 ("The voucher provides the recipient with priority in being matched with a living donor from the end of a future transplantation chain.").
[109] Cherry, *supra* note 15, at 509 ("The long-term success of organ vouchers relies decisively on the ability and willingness of participating transplantation centers to fulfill their contractual obligations to voucher holders.").

The first concern is whether the voucher donation should be viewed as a gift to the beneficiary because the donor does not receive any monetary compensation for the donation and the donor's intent is to altruistically help the voucher recipient receive a live donor kidney when a transplant becomes necessary.[110] But even framing the issue in this way misses the point that the donor is not giving a kidney as a gift to the NKR or to the actual recipient of the donor's kidney. The understanding between the donor and the NKR is that the donor will receive a tangible benefit for donating a kidney in the form of a voucher redeemable by the intended recipient in the future.[111] Because in most cases the donor would not donate without this understanding,[112] the donation cannot be viewed as a gift.

Second, in order to have a legally enforceable contract, both parties to the contract must provide consideration and be bound by the terms of the agreement.[113] In the voucher program, the agreement between the NKR and the donor is entered into

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[110] Koplin, *supra* note 69, at 584 ("Indeed, the exchange of kidneys for 'kidney vouchers' more closely resembles an indirect gift from the donor to their intended recipient than a market trade."); Kieran Healy & Kimberly D. Krawiec, *Custom, Contract and Kidney Exchange*, 62 DUKE L.J. 645, 663 (2012) ("[N]o 'consideration' is present in a gift. A mere promise alone to make a gift of an organ is not intended to be legally binding.").

[111] Wall, Veale & Melcher, *supra* note 10, at 2821 ("[With voucher donation,] a living donor donates a kidney to receive credit for a named relative or friend to be transplanted in the future.").

[112] Martin & Danovitch, *supra* note 92, at 542 ("[I]t is possible that the hopes of helping a loved one in the future are being unfairly exploited for the benefit of the broader community for whom advanced donation enables an increase in transplants."). *See also* Veale et al., *supra* note 6, at 2115 ("[V]ouchers remove a disincentive to kidney donation, namely, a reluctance to donate now lest one's family member should need a transplant in the future.").

[113] *See* Jessica A. Clarke, *Identity and Form*, 103 CAL. L. REV. 747, 771 (2015) ("For a contract to be enforceable, both sides must offer something in exchange." (quoting Lon Fuller, *Consideration and Form*, 41 Colum. L. Rev. 799, 815 (1941))). *See also* Continental Bank of Pa. v. Barclay Riding Acad., Inc., 459 A.2d 1163 (N.J. 1983) ("No contract is enforceable, of course, without the flow of consideration—both sides must 'get something' out of the exchange." (citing Friedman v. Tappan Development Corp., 126 A.2d 646, 651 (N.J. 1956); 1 A. Corbin, *Contracts*, § 110 (1963 ed.))).

before the donor undergoes the surgery to give his or her kidney.[114] The terms of the agreement are laid out on a pre-printed form prepared by the NKR, which contains its name on the top and bottom.[115] The form states:

> I would like to participate in the [advanced donation program]. I am willing to donate a kidney to an NKR patient and understand that my donation would give my [intended recipient] a prioritized opportunity to receive a kidney as part of a swap within the NKR.[116]

The form is entitled "Informed Consent," contains a space for designating the intended recipient, and must be signed by the intended donor.[117] Although the NKR does not also sign the form, this alone would not affect the validity of the agreement.[118]

The NKR's promise, as set forth in the form, can be seen as an offer.[119] The NKR promises that the voucher recipient will receive priority for a live donor kidney once the donor donates.[120] On the other hand, the donor's agreement to donate is not a binding

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[114] Wall, Veale & Melcher, *supra* note 10, at 2821 ("The donor consent form states that 'my donation would give my . . . [intended recipient] a prioritized opportunity to receive a kidney as part of a [kidney exchange] within the NKR.") (quoting NAT'L KIDNEY REGISTRY, *supra* note 90). *See also* Flechner, et al., *supra* note 11, at 2713 ("In advance, the ADP donor gives full informed consent.").

[115] NAT'L KIDNEY REGISTRY, *supra* note 90.

[116] *Id.*

[117] *Id.*

[118] *See* Lease America.org., Inc., v. Rowe Int'l Corp., 94 F. Supp. 3d 85, 90 (D. Mass. 2015) ("A written contract signed by only one party may be binding and enforceable where the non-signing party manifests acceptance.") (citing Haufler v. Zotos, 845 N.E.2d 322 (Mass. 2006)). *See also* 17 C.J.S., *Contracts,* § 75 (2018) ("[A] written contract, although unsigned by a party, is binding if the party accepts or performs under it or accepts the benefits thereunder.").

[119] *See* Ulster Sav. Bank v. 28 Brynwood Lane, No. X08CV054007323S, 2010 Conn. Super. LEXIS 100, at * 37 (Conn. Super. Ct. Jan. 11, 2010) ("Consideration may take the form of a promise to do or give something of value. The essence of consideration is a benefit or detriment that has been bargained for and exchanged for the promise.") (citing State Nat'l Bank v. Dick, 325 A.2d 235 (Conn. 1973)); Brian Morris, *You've Got To Be Kidneying Me!: The Fatal Problem of Severing Rights and Remedies from the Body of Organ Donation Law*, 74 BROOK. L. REV. 543, 562 (2009) ("The black letter of contract formation requires an offer, an acceptance, and some form of consideration. Consideration is usually something of value offered in exchange for the promise to perform an obligation.").

[120] *See* Veale et al., *supra* note 6, at 2115; *see also* Fischer, *supra* note 7.

promise that could be viewed as consideration or acceptance of the offer. As a matter of policy, donors can opt out of donating at any time, so the donor cannot be bound by the expression of willingness to donate in the agreement.[121] Physicians will not compel any living donor to donate a kidney, even if the person has agreed to donate in writing beforehand.[122] Since there is no consideration on the donor's part, the signed agreement, by itself, is insufficient to make the contract enforceable.[123]

However, the contract can be enforced after the donation takes place.[124] The donor's performance then furnishes the consideration necessary to make the offer

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[121] *See* Healy & Krawiec, *supra* note 73, at 663, 667 ("A mere promise alone to make a gift of an organ is not intended to be legally binding . . . . [I]n practice, doctors will not force [donors] to go through with a donation if they really do not want to.").

[122] *See, e.g.*, *Deciding to Donate a Kidney*, BARNES JEWISH HOSPITAL, https://www.barnesjewish.org/Medical-Services/Transplant/Kidney-Transplant/Becoming-a-Kidney-Donor/Deciding-to-Donate-a-Kidney (last visited Mar. 25, 2018) ("Donor candidates may opt out of donation up until the time of surgery."); *Frequently Asked Questions about Living Kidney Donation*, UT SOUTHWESTERN MEDICAL CENTER, http://www.utswmedicine.org/conditions-specialties/transplant/programs/living-kidney-donation/faq.html (last visited Mar. 25, 2018) ("If you are accepted as a living donor, you also have the right to opt out of donating your kidney at any time."); *What to Expect as a Living Donor*, JOHN HOPKINS MEDICINE, https://www.hopkinsmedicine.org/transplant/living_donors/expect.html (last visited Mar. 25, 2018) ("At any time during the evaluation process, up until the moment of surgery, you are entitled to change your mind about the donation.").

[123] *See* Thoma v. Oxford Performance Materials Inc., 100 A.3d 917, 923 (Conn. App. Ct. 2014) ("[I]n the absence of consideration an executory promise is unenforceable.") (quoting Conn. Nat'l Bank v. Voog, 659 A.2d 172 (Conn. 1995)); NSS Restaurant Services, Inc. v. West Main Pizza of Plainville, LLC, 35 A.3d 289, 292 (Conn. App. Ct. 2011) ("Put another way, '[u]nder the law of contract, a promise is generally not enforceable unless it is supported by consideration.'") (alteration in original) (quoting Thibodeau v. Am. Baptist Churches of Conn., 994 A.2d 212 (Conn. App. Ct. 2010)); Seaview Orthopaedics ex rel. Fleming v. Nat'l Healthcare Resources, Inc., 841 A.2d 917, 921 (Super. Ct. N.J. App. Div. 2004) ("It is well settled that contracts are not enforceable in the absence of consideration, i.e., 'both sides must get something out of the exchange.'") (citing Continental Bank of Pa. v. Barclay Riding Acad., 459 A.2d 1163, 1171 (N.J. 1983)) (internal citations omitted); McGrath v. Electrical Constr. Co., 364 P.2d 604, 609 (Ore. 1961) ("A promise not supported by consideration is not enforceable.") (citing Hoskins v. Powder Land & Irr. Co., 176 P. 124 (Ore. 1918)).

[124] *See e.g.*, Toussaint v. Blue Cross & Blue Shield, 292 N.W.2d 880, 885 (Mich. 1980) ("The enforceability of a contract depends, however, on consideration and not mutuality of obligation.") (citing Stauter v. Walnut Grove Products, 188 N.W.2d 305, 311 (Iowa 1971)); *Stauter*, 188 N.W.2d at 311 ("'[M]ere lack of mutuality in and of itself does not render a contract invalid. Though consideration is essential to the validity of a contract, it is not essential that such consideration consists of a mutual promise.'") (citing Hanson v. Central Show Printing CO., 130 N.W.2d 654, 656 (Iowa 1964)).

enforceable.[125] This type of contract is called a unilateral contract because the "offer cannot be accepted by promising to perform; rather, the offeree must accept [the offer], if at all, by performance, and the contract then becomes executed."[126] In other words, in a unilateral contract a promise is not given for another promise, instead an act triggers an obligation on the part of the offeror.[127]

The NKR's printed agreement explicitly takes into account that the agreement does not become binding until the donation takes place. The form provides that "[o]nce the [intended donor] donation has occurred, the [intended recipient] may be activated by their transplant center for matching within the NKR."[128] Thus, the priority given to the intended recipient is not effective until after the donor has fully performed his or her part of the bargain. Once the kidney donor performs, there is a binding unilateral contract between the kidney donor ("offeree") and the NKR ("offeror"). The donor's act of giving a kidney gives legal significance to the written voucher agreement and potentially makes the contract enforceable.[129]

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[125] *See* Strata Prod. Co. v. Mercury Exploration Co., 916 P.2d 822, 827 (N.M. 1966) ("In a unilateral contract, the offeree accepts the offer by undertaking the requested performance.").
[126] Multicare Med. Ctr. v. Dep't of Soc. & Health Servs., 790 P.2d 124, 131 (Wash. 1990) ("[A] traditional unilateral contract [is one] in which the offeror makes a promise in exchange, not for a reciprocal promise by the offeree, but for some performance.") (citing Cook v. Johnson, 221 P.2d 525 (Wash. 1950)); *see also* Strata Prod. Co., 916 P.2d at 827.
[127] *See* National Educ. Ass'n—R.I. by Scigulinsky v. Retirement Bd. R.I. Emples. Retirement Sys., 890 F. Supp. 1143, 1157 (D.R.I. 1995) ("A unilateral contract consists of a promise made by one party in exchange for the performance of another party, and the promisor becomes bound in contract when the promisee performs the bargained for act.") (citing B & B Appraisals v. Gaudette Machinery Movers, Inc., 733 F. Supp. 505, 508 (D.R.I. 1990)); Jason A. Walters, Comment, *The Brooklyn Bridge Is Falling Down: Unilateral Contract Modification And The Sole Requirement of the Offeree's Assent*, 32 CUMB. L. REV. 375, 382 (2001/2002) ("[O]nce performance is complete, the offeror is bound.").
[128] NAT'L KIDNEY REGISTRY, *supra* note 90.
[129] *See* Harms v. Northland Ford Dealers, 602 N.W.2d 58, 61 (S.D. 1999) ("This was a vintage unilateral contract with performance by the offeree and acceptance."); Multicare Med. Ctr. v. Dep't of Soc. & Health Servs., 790 P.2d 124, 131 (Sup. Ct. Wash. 1990) ("[U]nder a unilateral contract, an offer cannot be accepted by promising to perform; rather, the offeree must accept, if at all, by performance, and the contract then becomes executed.") (citing *Cook*, 221 P.2d 525).

IV. THE VOUCHER AGREEMENT IS NOT TOO VAGUE TO BE ENFORCED

In order for a contract to be enforced, the offeror must promise something significant.[130] If the offeror's promise is so vague and indefinite that the offeror is given complete discretion to determine whether to perform, the promise is considered illusory.[131] With respect to the voucher agreement, the NKR promises to give the recipient a "prioritized opportunity to receive a kidney as part of a [kidney exchange]."[132] However, the NKR's explanation of what "prioritized opportunity" means is so insufficient, and arguably gives the NKR so much discretion concerning whether and how to allocate kidneys to voucher recipients, that its offer amounts to an illusory promise.[133]

A. The NKR Does Not Explain What "Prioritized Opportunity" Means

The NKR does set out a list of priorities for allocating end-of-chain kidneys. Voucher recipients receive end-of-chain kidneys after "former NKR Donors in need of a kidney transplant" and "patients involved in real-time swap failures where the donor has donated but the patient did not get a kidney."[134] But this list fails to explain how the NKR

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[130] *See* Continental Bank of Pa. v. Barclay Riding Acad., Inc., 459 A.2d 1163 (N.J. 1983) ("No contract is enforceable, of course, without the flow of consideration—both sides must 'get something' out of the exchange.") (citing Friedman v. Tappan Development Corp., 126 A.2d 646, 651 (N.J. 1956); 1 A. Corbin, Contracts § 110 (1963 ed.)).

[131] *See* MICHAEL HUNTER SCHWARTZ & DENISE RIEBE, CONTRACTS: A CONTEXT AND PRACTICE CASEBOOK 134 (2009); *see also* Morrow v. Hallmark Cards, Inc., 273 S.W.3d 15, 30 (Mo. Ct. App. 2008) ("[A]n agreement in which one party retains the unilateral ability to avoid its contractual obligations is illusory and unenforceable.") (Ahuja, J., concurring).

[132] NAT'L KIDNEY REGISTRY, *supra* note 90.

[133] *See* Liu, Krawiec & Melcher, *supra* note 87, at 1038 ("Although it is possible that the promise of priority is too vague to rise to the level of contract, if it is a contract, it is unclear what the contract is for."). *See also* Wall, Veale & Melcher, *supra* note 10, at 2818 ("Specific concerns raised by advanced donation include the management of uncertainty . . . [and] the scope of obligation that the organization has to the kidney exchange paired recipient.").

[134] *See Info for Centers*, *supra* note 59 (setting out the NKR's list of priorities for allocating end-of-chain kidneys.).

determines when a kidney chain ends and how the participants in the chain are selected.[135] This is a significant concern because it may be difficult for a voucher recipient to ever match with an end-of-chain donor. Kidney chains generally end when a bridge donor reneges on a promise to donate, must withdraw due to medical concerns or personal obligations, or cannot continue the chain due to a difficult-to-match blood type.[136] Given these reasons for ending a kidney chain, it would appear that the only end-of-chain donors available for voucher recipients would be those who have such difficult-to-match blood types that they do not match with any non-voucher recipients in the NKR pool.[137]

The problem of matching with an end-of-chain donor is magnified for voucher recipients who are highly sensitized and/or have blood type O.[138] Kidney exchanges have a high concentration of potential recipients with these characteristics because they are especially hard to match with a compatible donor.[139] It seems likely that if these potential recipients have such a hard time finding a compatible donor, voucher recipients who are

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[135] *See* Liu, Krawiec & Melcher, *supra* note 87, at 1038 ("Both how the patient is prioritized and the waiting time for ADP patients are unclear. . . . 'Prioritized opportunity' is not defined."). *See also* Martin & Danovitch, *supra* note 92, at 542 ("[Voucher programs] may complicate some of the longstanding ethical foundations of related living donation, because there is a far greater uncertainty concerning the benefits which may accrue in time to the donor's intended beneficiary.").

[136] *See* Fumo et al., *supra* note 51, at 2647.

[137] *See* Tenenbaum, *supra* note 25; Montgomery, *supra* note 23, at 455 ("NEAD [chains] will stall after several iterations due to the appearance of a donor with a difficult-to-match blood type.").

[138] *See* Tenenbaum, *supra* note 137 (describing why it is difficult to match those with blood type O and sensitization problems); *see also* Flechner et al., *supra* note 11, at 2715 ("[In the ADP program], blood group O recipients and highly sensitized patients should expect the longest wait times."). *See also* Marc L. Melcher et al., *supra* note 40, at 108 ("[T]ransplant chains are seldom ended to the wait list with a blood type O donor because, as the 'universal donors,' O donors can often extend the chain further.").

[139] *See* Flechner et al., *supra* note 11, at 2715 ("As one would predict, blood group O recipients and highly sensitized patients should expect the longest wait times."). *See also* Melcher et al., *supra* note 43, at 3581 ("One of the Achilles heals of [kidney exchanges] has been the [concentration of incompatible pairs] with blood type 'O' and highly sensitized recipients and [the shortage of] 'O' donors."). *See also* Veale et al., *supra* note 6, at 2118 ("[H]ighly sensitized and 'O' blood group candidates will be a concern for voucher programs.").

highly sensitized or have blood type O would have even more difficulty matching with an end-of-chain donor.[140]

Indeed, the NKR recognized that it might have difficulty ever finding a match for some voucher recipients and explicitly included in the voucher agreement with the donor that it does not guarantee that the intended recipient will receive a transplant through the voucher program.[141] The NKR similarly included in the voucher recipients' informed consent form that "there is a risk [the voucher recipient] may not get transplanted through the ADP due to: . . . NKR's inability to find an acceptable compatible donor."[142] In addition, the NKR warns voucher recipients that those who have blood type O or are highly sensitized might have a delay of one to two years or more after activation before receiving a kidney.[143]

Since the NKR does not guarantee that the voucher recipient will receive a transplant or that the wait for a transplant will not be a long one—perhaps even longer than waiting for a transplant on the DDWL—there is a legitimate concern about whether the NKR's promise is simply illusory.[144] An illusory promise is no promise at all because what is promised is "condition[ed] on some fact or event that is wholly under the promisor's control and bringing it about is left wholly to the promisor's own will and

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[140] *See* Martin & Danovitch, *supra* note 92, at 542 ("It will be some years before sufficient data are available to provide estimates of the impact of an advanced donation on the probability of an intended beneficiary benefiting from the [kidney exchange] program, and the chances of an individual benefiting will be influenced by . . . the relative difficulty of finding a suitably matched donor.").

[141] *See* Taylor, *supra* note 8, at 601 ("[T]here is no guarantee that [the intended recipient] will receive a kidney, as there is no guarantee that a matching organ will become available."). *See also* NAT'L KIDNEY REGISTRY, *supra* note 90 ("There is no guarantee that my [intended recipient] will be transplanted through the ADP.").

[142] NAT'L KIDNEY REGISTRY, *supra* note 90.

[143] *See id.*

[144] *See* Liu, Krawiec & Melcher, *supra* note 87, at 1038 ("The voucher program is a complex and uncertain process.").

discretion."[145] Interpreting the NKR's promise to be illusory would be particularly unfair in the context of voucher donations because the kidney donors will have undergone the pain and risk of major kidney surgery based on the belief that the NKR has committed to giving his or her loved one some tangible advantage in receiving a future live donor kidney.[146]

B. The Duty of Good Faith and Fair Dealing and the Parties' Intent in Entering Into the Voucher Agreement

The potential unfairness of this outcome is a good example of why most jurisdictions have concluded that "[e]very contract imposes upon each party a duty of good faith and fair dealing . . . ."[147] The duty of good faith requires each party to interpret its promise in a manner that gives effect to the parties' intentions in entering into the

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[145] Asmus v. Pacific Bell, 999 P.2d 71, 79 (Cal. 2000) (quoting 2 Corbin on Contracts (1995) § 5.32).

[146] *See* Third Story Music, Inc. v. Waits, 48 Cal. Rptr. 2d 747, 751 (Cal. Ct. App. 1995) ("The complaint that a promise is illusory often comes in rather poor grace from the addressee of the allegedly illusory promise . . . . For this reason, courts are quite properly prone to examine the context to conclude that the escape hatch was intended to be taken only 'in good faith' or in the 'exercise of a reasonable discretion' or upon some other condition not wholly within the control of the promisor.") (quoting 1 Corbin, Contracts, § 1.17).

[147] RESTATEMENT (SECOND) OF CONTRACTS, § 205 (AM. LAW INST.); *see also* Teri J. Dobbins, *Losing Faith: Extracting the Implied Covenant of Good Faith from (Some) Contracts*, 84 OR. L. REV. 227, 228 (2005); Cates Construction, Inc. v. Talbot Partners, 980 P.2d 407, 415 (Cal. Sup. Ct. 1999) ("By now it is well established that a covenant of good faith and fair dealing is implicit in every contract.") (collecting cases); Palisades Properties, Inc. v. Brunetti, 207 A.2d 522, 531 (N.J. Sup. Ct. 1965) ("[I]n every contract there exists an implied covenant of good faith and fair dealing.'") (citing 5 Williston on Contracts § 670 (3d ed. 1961)).

contract.[148] This principle also allows courts to uphold contracts that would otherwise be unenforceable.[149]

Courts will similarly focus on the parties' intentions in interpreting a contract[150] and then enforce the provisions of the contract to reasonably carry out those intentions.[151] Courts ascertain the intent of the parties by examining contextual evidence and the language in the agreement.[152]

With respect to the voucher agreement, the parties clearly intend the voucher recipient to receive some advantage in obtaining a donor kidney when he or she needs one.[153] Indeed, the whole reason for the voucher program is to encourage the donor to

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[148] *See* Questar Builders, Inc. v. CB Flooring, LLC, 978 A.2d 651, 670 (M.D. 2009) ("The tendency of the law is to avoid the finding that no contract arose due to an illusory promise when it appears that the parties intended a contract.") (quoting 2 Corbin, Contracts, § 5.28 at pp. 149-150 [1960]); Dalton v. Educational Testing Service, 663 N.E.2d 289, 291 (N.Y. 1995) ("Encompassed within the implied obligation of . . . good faith [are] 'any promises which a reasonable person in the position of the promisee would be justified in understanding were included.'") (quoting Rowe v. Great Atl. & Pac. Tea Co., 385 N.E.2d 566 (N.Y. 1978)); Dobbins, *supra* note 147, at 251 ("Implying a covenant of good faith in a contract granting sole discretion to one party is prudent to the extent that it is consistent with [the] parties' intent to enter into a binding contract.").

[149] *Third Story Music, Inc.*, 48 Cal. Rptr. 2d at 752 ("[T]he implied covenant of good faith is . . . applied to contradict an express contractual grant of discretion when necessary to protect an agreement which otherwise would be rendered illusory and unenforceable.").

[150] *See* Flood v. ClearOne Communs., Inc., 618 F.3d 1110, 1121-22 (10th Cir. 2010) ("[By applying the implied covenant of good faith and fair dealing, the court gives effect to] the reasonable expectations created by the autonomous expressions of the contracting parties.") (quoting Tymshare, Inc., v. Covell, 727 F.2d 145, 1152 (D.C. Cir. 1984)); *see also* Chodos v. W. Publ. Co., 292 F.3d 992, 996-97 (9th Cir. 2002) (holding that the contract "required [Chodos] to produce a work of publishable quality, but allowed West, in its discretion, to decide unilaterally whether or not to publish his work" and that West had a duty of good faith and fair dealing in deciding whether or not to accept the author's manuscript and that the intent of the parties in entering into the contract would be used to interpret the scope of West's discretion.).

[151] Cal. Lettuce Growers v. Union Sugar Co., 289 P.2d 785, 790 (Cal. 1955) (noting that the law does not favor rejecting contracts "'because of uncertainty,'" but rather construes them "'as to carry into effect the reasonable intentions of the parties if that can be ascertained'") (collecting cases).

[152] *Questar Builders, Inc.*, 978 A.2d at 670 ("The nature of the promise to be implied will vary with the kind of transaction and the particular context surrounding the individual transaction.") (quoting 2 Corbin, Contracts, § 5.28 at pp. 149-150 [1960]).

[153] *See* Veale et al., *supra* note 6, at 2116 ("[A]ll parties involved [in creating the voucher program] agreed that while the Registry is committed to taking the steps necessary to provide a transplant, the voucher cannot ensure that a suitable kidney would be available.").

donate a kidney in return for an advantage for his or her loved one in obtaining a future transplant.[154] One advantage of receiving an end-of chain kidney is that the recipient will receive a kidney from a live donor, rather than receiving a deceased donor kidney from the DDWL.[155] In general, live donor kidneys last considerably longer than deceased donor kidneys; an average of 21.6 years for live donor kidneys compared to 13.8 years for kidneys from deceased donors.[156]

But time also matters.[157] Although a kidney recipient can remain on dialysis while waiting for a kidney, the patient's health worsens over time.[158] Moreover, "[s]tudies indicate that the less time the patient is on dialysis, the better the transplant outcome."[159] At some point, if the wait for a live donor kidney from the end of a kidney chain is too long, a voucher recipient would do better simply getting a deceased donor kidney by waiting on the DDWL and the voucher would be useless.[160]

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[154] *See* Taylor, *supra* note 8, at 600 ("The [ ] voucher system [ ] provides an incentive to person A to donate one of her kidneys to person C to whom he would not have otherwise donated by making it more likely that the person to whom A would have donated a kidney will receive one when she needs it.").

[155] *See* Veale et al., *supra* note 6, at 2115 ("The voucher provides the recipient with priority in being matched with a living donor.").

[156] V.B. Kute et al., *A Potential Solution to Make the Best Use of a Living Donor—Deceased Donor List Exchange,* 16 AM. J. TRANSPLANTATION 3580, 3580 (2016).

[157] *See Living Donors,* NAT'L KIDNEY REGISTRY, http://kidneyregistry.org/living_donors.php (last visited Mar. 25, 2018).

[158] Dan Davis & Rebecca Wolitz, *The Ethics of Organ Allocation* (Sept. 2006) (unpublished working paper) (http://bioethicsarchive.georgetown.edu/pcbe/background/davispaper.html).

[159] *See Living Donors, supra* note 157.

[160] *See* Delmonico et al., *supra* note 24, at 1632 ("The comparative rate of mortality that is associated with dialysis versus transplantation is substantial at every age group."); Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 531 ("[B]efore an ADP donor agrees to [donate], the ADP donor must clearly understand the alternatives . . . includ[ing] the fact that individuals with [end stage renal disease] are eligible for deceased donor kidneys."); Melcher et al., *supra* note 43, at 3581 ("[I]n the United States, highly sensitized patients and 'O' patients with 'A' donors compose the majority of patients in a KPD pool and many of these patients may be better off accepting a [deceased donor kidney] today than waiting for a [kidney exchange] offer in the future."); *see also* Veale et al., *supra* note 6, at 2118 ("Vouchers . . . neither help nor hurt recipients' status on the deceased donation waitlist.").

Therefore, the intent of the NKR and the donor can only logically have been a voucher that entitles the recipient to a reasonable opportunity to receive a live donor kidney within a reasonable amount of time. The NKR can meet this promise by setting up an optimization algorithm that takes into account that voucher recipients must be given priority for matching with end-of-chain donors within a reasonable time after they express their need for a transplant.[161]

A reasonable time should probably be significantly shorter than the time it would take for the recipient to receive a transplant on the DDWL, although this calculation can also take into consideration the advantage to the voucher recipient of receiving a live donor transplant. Of course, there may be some voucher recipients who are so highly sensitized and hard to match that a suitable match will not be found.[162] But anything short of providing a probable significant advantage to the voucher recipient would be inconsistent with the reasonable expectations of the kidney donor and would be tantamount to a failure of the NKR to act in good faith.[163]

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[161] *See* Flechner, et al., *supra* note 11, at 2713 ("[T]he [intended] recipient [is] placed into the NKR computer matching algorithm to end the next available chain, according to blood group and NKR Medical Board priorities for ending chains."); Tenenbaum, *supra* note 137.

[162] *See* Flechner, et al., *supra* note 11, at 2716 ("Hard-to-match recipients, especially blood group O recipients with high [sensitivity], remain a [sic] difficult to match and should be carefully considered in the ADP selection process."); Keith & Vranic, *supra* note 28, at 684 ("[F]or many highly sensitized patients the probability of finding a match in the relatively small pools of donors in [kidney exchange] programs is limited.").

[163] *See* Cal. Lettuce Growers v. Union Sugar Co., 289 P.2d 785, 791 (Cal. 1955) ("[W]here a contract confers on one party a discretionary power affecting the rights of the other, a duty is imposed to exercise that discretion in good faith and in accordance with fair dealing.") (collecting cases).

C. Potential Problems with Interpreting the Voucher Agreement to Impose a Duty of Good Faith and Fair Dealing and Suggested Solutions

Unfortunately, this solution may cause serious equity issues. For example, if the NKR is pressured to allocate kidneys to voucher recipients, a voucher recipient with serious health issues who may get only a small benefit from a transplant may end up receiving a kidney instead of a patient who could receive a very substantial increase in life expectancy.[164] This is a very real concern because it is impossible to predict what the intended recipient's actual medical condition will be when the recipient needs a kidney as many as twenty or more years into the future.[165] Similarly, the NKR may be forced to give preference to a voucher recipient who is a questionable transplant candidate due a history of noncompliance with medical instructions.[166] Failing to take into account whether voucher recipients are the best choices for these transplants has enormous significance because of the dire health consequences that can result for those who are not selected to receive the transplant.[167]

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[164] *See* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 527 ("Will transplant programs feel obligated or at least feel some 'subtle' pressure to list a voucher holder, even if it is obvious that he is a questionable transplant candidate (e.g., noncompliance, multiple medical co-morbidities).").

[165] *See* Flechner, et al., *supra* note 11, at 2715 ("Perhaps the most important consideration is that a time frame for identification of a suitable donor for the paired recipient cannot be predicted, and that due to logistical and medical concerns a future transplant through the ADP may never occur."); Liu, Krawiec & Melcher, *supra* note 87, at 1038 (noting that "the health and/or sensitization of the [intended recipients] may change, making them unsuitable for or difficult to transplant."); Wall, Veale & Melcher, *supra* note 10, at 2821 ("[With voucher donation,] because [of] the time between donation and matching . . . [t]here is no guarantee for how quickly a kidney will be found [and the] match may never become available, especially for highly sensitized patients or the recipient becomes too sick to transplant.").

[166] Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 527.

[167] *See* Wall, Veale & Melcher, *supra* note 10, at 2818 ("Specific concerns raised by advanced donation include . . . the potential to unfairly advantage the [intended] recipient."); *see also Organ Donation and Transplantation Statistics*, *supra* note 5 ("In 2014, 4,761 patients died while waiting for a kidney transplant. Another 3,668 people became too sick to receive a kidney transplant.").

Changing the optimization algorithm may also result in substantially shortening some kidney chains to ensure that the chain ends with a donor who is compatible with the voucher recipient.[168] This would result in fewer transplants and may skip recipients who would otherwise have received a kidney.[169] Since the voucher recipient will not have a paired donor to contribute to the current kidney chain, the chain will always end when the voucher recipient receives a transplant.[170]

Despite these shortcomings, vouchers make practical sense because so many patients will benefit right now.[171] Each voucher donor can start a kidney chain that results in several donations and relieves the long waits on the current DDWL.[172] There are also recent advances in medicine that may allow scientists, within the next decade, to create synthetic kidneys[173] or enable animals to grow kidneys that can be used for human transplantation.[174] By the time the voucher program would have to pay its debt to many of the voucher recipients, there may be little or no need for live donor kidneys.[175]

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[168] *See* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 527 ("It is the case that the need to end a chain that matches a voucher recipient may change the algorithmic solution of the NKR, which will lead to different donor-recipient pairs being selected for a particular chain.").

[169] *See id.* ("One might argue that giving the ADP candidate this priority is unfair to some who would otherwise receive organs at the end of the chain or is inefficient because it shortens the chain.").

[170] *See* Veale et al., *supra* note 6, at 2117 ("When the voucher is redeemed, a future chain of transplantation will end by providing the voucher recipient with a compatible kidney.").

[171] *See id.* at 2119 ("[The voucher program] could, if broadly adopted, significantly increase the number of living donor transplants performed and thereby reduce the waiting time for a deceased donor transplant.").

[172] *See id.* at 2117 ("[The voucher program] could substantially increase the number of [kidney] chains and thus remove patients from the deceased donor waitlist.").

[173] *See e.g.*, Rebecca Zumoff, *Implantable Artificial Kidney Project Making Progress*, NEPHROLOGY NEWS & ISSUES (Feb. 25, 2016), https://www.nephrologynews.com/implantable-artificial-kidney-project-making-progress/

[174] *See* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 531 ("[N]ew treatments may become available that reduce the value of th[e] voucher."); *see also* Sarah Knapton, *World's First Human-Sheep Hybrids Pave Way for Diabetes Cure and Mass Organ Transplants*, TELEGRAPH (Feb. 17, 2018, 9:00 PM), https://www.telegraph.co.uk/news/2018/02/17/worlds-first-human-sheep-hybrids-pave-way-diabetes-cure-mass/.

[175] *See* Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 527 ("The NKR website explains that ADP donors and their voucher holders should assume that there is a chance the promise [of a kidney] cannot be fulfilled, that the agency responsible for providing the kidney may not even

But the NKR cannot count on these advances. Due to the importance of maintaining trust in the transplant system,[176] the NKR should consider excluding some pairs from participation in the voucher program if the voucher recipient would be particularly hard to match.[177] Voucher donors and recipients should also be informed that voucher recipients may not qualify for an end-of-chain transplant if their health deteriorates or they are found to be questionable candidates for a transplant due to noncompliance concerns.[178] The current recipient informed consent form does state, "[t]here is risk that I may not get transplanted through the ADP due to: [a] sensitization event [or a] situation whereby I become medically unable to go to surgery."[179] However, this language is insufficient to adequately inform recipients that their health may deteriorate over time due to kidney disease and/or dialysis and that this decline may make them unsuitable candidates for a kidney transplant.[180]

In addition, the NKR should consider being more transparent about its algorithm for determining the participants in a kidney chain and, if possible, creating some parameters indicating the length of time a voucher recipient can expect to wait for a

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exist when the kidney is needed, and that new technologies may make alternative treatments of the kidney disease possible, thus negating the value of the contract.").

[176] *See* Liu, Krawiec & Melcher, *supra* note 87, at 1038 ("[It is important not to] jeopardize the trust on which registries depend for donor and patient participation.").

[177] *See* Flechner, et al., *supra* note 11, at 2716 ("Hard-to-match recipients, especially blood group O recipients with high cPRAs, remain a [sic] difficult to match and should be carefully considered in the ADP selection process.").

[178] *See id.* at 2716 ("[G]reat care is needed to provide informed consent for the uncertainty of the process."); Martin & Danovitch, *supra* note 92, at 542 ("[R]igorous consent processes should help to ensure that donors are fully informed of the uncertainties concerning potential benefits to the voucher recipient(s)."); Wall, Veale & Melcher, *supra* note 10, at 2821 ("[Advanced Donation Programs] manage uncertainty with the consent process.").

[179] NAT'L KIDNEY REGISTRY, *supra* note 90.

[180] *See* Veale et al., *supra* note 6, at 2118 ("[M]any vouchers will never be redeemed (because relatively few healthy people develop kidney failure).").

transplant.[181] This may be particularly difficult with the voucher program because of the potentially long wait before the voucher recipient needs a transplant.[182] However, some indication of the amount of time a voucher recipient could expect to wait for an end-of-chain kidney would give donors a better idea of what they are getting in return for their donation and help prevent future decisional regret and distrust of the transplant system.[183]

V. VOUCHER RECIPIENTS CAN REDEEM THE VOUCHER

Another concern is whether voucher recipients can enforce the agreement between the NKR and the voucher donor. This will be especially important if more individuals like Howard Broadman enter the voucher program so they do not become too old to donate.[184] Howard Broadman was already sixty-four years old when he donated a kidney[185] and his grandson was not expected to need a donation for another ten to fifteen years.[186] Therefore, by the time his grandson could redeem the voucher, Broadman might be seventy-nine years old. Since the average life expectancy of a male in the United States

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[181] Wall, Veale & Melcher, *supra* note 10, at 2820 ("The recipient consent requires an explanation of how the matching process works . . . and how prioritization is accomplished among competing recipients.").
[182] *Id.* at 2821 ("[The degree of] uncertainty about when [an intended] recipient will get a kidney transplant . . . increases [as] the time between donation and matching the recipient increases.").
[183] Friedman Ross, Rodrigue & Veatch, *supra* note 4, at 533 ("[F]or such programs to be successful, public trust must be preserved by ensuring that all stakeholders—living donors, their intended recipients, transplant programs and society—are fully informed about the relative risks and benefits of ADP participation."); Wall, Veale & Melcher, *supra* note 10, at 2821 ("Although an exact timing of a match cannot be guaranteed, there may be a way to improve the consent process by providing a predicted timeframe based on the program and recipient characteristics to help the donor and recipient make informed decisions regarding advanced donation.").
[184] *See* Wall, Veale & Melcher, *supra* note 10, at 2821 ("The child's [sixty-four]-year-old grandfather donated. . . . If it were not for the voucher program, the grandfather would likely have become ineligible to be a living kidney donor with advancing age."); Jeffrey Veale, Opinion, *Give a Kidney, Get a Kidney*, WALL STREET J. (Aug. 3, 2016), https://www.wsj.com/articles/give-a-kidney-get-a-kidney-1470265583 ("The voucher idea is the brainchild of retired Judge Howard Broadman. . . . Mr. Broadman . . . knew that by the time [his grandson] needed a kidney transplant, [he] would be too old to donate.").
[185] Veale et al., *supra* note 6, at 2116.
[186] *See* Veale, *supra* note 184.

is seventy-eight years,[187] there is a significant chance that Broadman will not be alive when his grandson wants to redeem the voucher.

However, Broadman's grandson should have no problem enforcing the terms of the agreement himself.[188] In order to enforce the agreement, Broadman's grandson would have to qualify as an intended beneficiary.[189] Because Broadman's purpose in entering into the agreement with the NKR was to give his grandson "the benefit of [his] promised performance,"[190] his grandson would be able to easily meet this requirement. Indeed, the intent to benefit the voucher recipient is clear from the agreement itself[191] and the voucher

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[187] *Life Expectancy at Birth*, CENTRAL INTELLIGENCE AGENCY, THE WORLD FACTBOOK, https://www.cia.gov/library/publications/the-world-factbook/fields/2102.html (last visited Apr. 14, 2018). An individual living to age sixty-four will have a life expectancy longer than the average life expectancy at birth. *Id.* At age sixty-four, an individual will have a life expectancy of approximately eighty-two point six years. *See Actuarial Life Table*, SOC. SECURITY ADMIN., https://www.ssa.gov/oact/STATS/table4c6.html (last visited Apr. 14, 2018).

[188] *See* Hedberg & Sons Co. v. Galvin, 144 N.W.2d 263, 265 (Minn. 1966) ("Although we have constantly been willing to give full force and effect to the rights of third-party beneficiaries, we have always required as a prerequisite some expression of intent on the part of the contracting parties that the person asserting such rights is to be a beneficiary of that contract.") (collecting cases); MCI Telecomms. Corp. v. Texas Utils. Elec. Co., 995 S.W.2d 647, 651 (Tex. 1999) ("A third party may recover on a contract made between other parties only if the parties intended to secure some benefit to that third party, and only if the contracting parties entered into the contract directly for the third party's benefit.") (collecting cases).

[189] E. ALLEN FARNSWORTH, CONTRACTS 657-68 (4th ed. 2004) ("In order to qualify as an intended beneficiary, one must meet two requirements. First one must show that 'recognition of the right to performance in the beneficiary is appropriate to effectuate the intention of the parties.' Second, one must show that . . . '(b) the circumstances indicate that the promise intends to give the beneficiary the benefit of the promised performance.'") (citing RESTATEMENT (SECOND) OF CONTRACTS § 302); JOHN E. MURRAY, JR., CORBIN ON CONTRACTS 55-56 (2007).

[190] RESTATEMENT (SECOND) OF CONTRACTS, *see also* Fourth Ocean Putnam Corp. v. Interstate Wrecking Co., Inc., 485 N.E.2d 208, 212 (N.Y. 1985) ("Essential to status as an intended beneficiary under subdivision 1 of [the Restatement (Second) of Contracts § 302 [1]] is . . . that 'the circumstances indicate that the promisee intends to give the beneficiary the benefit of the promised performance.'").

[191] *See* NAT'L KIDNEY REGISTRY, *supra* note 90 ("I am willing to donate a kidney to an NKR patient and understand that my donation would give my [intended recipient] a prioritized opportunity to receive a kidney as part of a swap with the NKR."); *see also* Matter of Jones, 189 N.Y.S.2d 389, 392 (Surr. Ct. 1959) ("'The New York cases cast upon a person seeking to obtain the benefits of a contract to which he was not a party the burden of establishing that it was intended for his benefit.' . . . 'Such a beneficial intent must be clearly found in the agreement.'") (first quoting In re Estate of Conay, 121 N.Y.S.2d 481 (Surr. Ct. 1953), *aff'd.* 284 A.D. 950 (N.Y. App. Div. 1952), then quoting Skinner Bros. Mfg. Co. v. Shevlin Engineering Co., 248 N.Y.S. 230 (N.Y. Sup. Ct. 1931)); MCI Telecomms Corp., 995 S.W.2d at 651 ("A third party may

recipient is explicitly referred to in the agreement as the "*intended* recipient."[192] (emphasis added).

Since all voucher donors are donating for the express purpose of obtaining an advantage for their intended recipients, those recipients will all be considered third party beneficiaries.[193] In that capacity, they can enforce the voucher agreement and redeem their vouchers without assistance from their voucher donors.[194]

CONCLUSION

As Ralph Waldo Emerson stated, "[o]ur distrust is very expensive."[195] There is probably no place where this statement applies better than live kidney donation. The entire kidney exchange program depends on the trust of donors who are willing to put their lives in the hands of transplant programs for the benefit of others.[196]

The NKR has earned the trust of the live donors in its ADP programs. While no voucher recipients have yet redeemed a voucher, the other ADP programs have been

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recover on a contract made between other parties only if the parties intended to secure some benefit to that third party, and only if the contracting parties entered into the contract directly for the third party's benefit.") (collecting cases).

[192] *See* ADVANCED DONATION PROGRAM: INFORMED CONSENT, *supra* note 90.

[193] *See* Matter of Jones, 189 N.Y.S.2d at 392 ("[I]n all of the cases which [the court has] examined, where the [third party] action was sustained, the facts showed that the promise clearly was for the third person's benefit, and made with that distinct intention.") (quoting Skinner Bros. Mfg. Co., 248 N.Y.S. 230).

[194] *See* Matter of Jones, 189 N.Y.S.2d at 392 ("A person not a party to the contract acquires the status of donee beneficiary, and is therefore entitled to enforcement of the contract, if and only if the promise is particularly exacted by the promisee for the benefit of such third person.") (quoting In re Estate of Conay, 121 N.Y.S.2d 481); RESTATEMENT (SECOND) OF CONTRACTS § 304 ("A promise in a contract creates a duty in the promisor and any intended beneficiary to perform the promise and the intended beneficiary may enforce the duty."); FARNSWORTH, *supra* note 189, at 670 ("Once it is decided that a third party is an intended beneficiary, it follows that the party has a right against the promisor."); JOHN E. MURRAY, JR., CORBIN ON CONTRACTS 101 (2007) ("Numerous cases have held that third party beneficiaries are entitled to enforce equitable remedies.").

[195] *See Quote by Ralph Waldo Emerson*, QUOTERY.COM, https://www.quotery.com/quotes/our-distrust-is-very-expensive/ (last visited Mar. 25, 2018).

[196] *See* Davis & Wolitz, *supra* note 158 ("[D]istrust is a major reason for the public's reluctance to donate organs, and policies of organ procurement may be ineffective if the public perceives the policies of organ allocation as unfair and thus untrustworthy.").

faithfully delivering kidneys to ADP recipients.[197] But voucher donors may need additional reassurance because of the long delay between their donation and the intended recipient's transplant.[198] Hopefully, this article will help provide that reassurance by showing that voucher agreements are enforceable contracts. To further engender trust, the NKR should consider being more transparent about its optimization algorithm and how it works, excluding voucher donors if their paired recipients are unlikely to receive a kidney within a reasonable time after they need a transplant, and clarifying the limitations on a recipient's eligibility to receive a kidney.[199] The NKR should also consider creating a document labelled a contractual agreement, rather than relying on the informed consent documents,[200] and signing it. This will help demonstrate the NKR's commitment to recognizing voucher agreements as enforceable contracts.

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[197] *See* Flechner, et al., *supra* note 11, at 2712; *see generally* Kute et al., *supra* note 156, at 3580 ("The median waiting time in the [NKR] (the largest paired exchange program in the United States) . . . is . . . 174 days for pairs that are very hard to match.").

[198] *See* Kerstein, *supra* note 3, at 566 ("The voucher program seems to require an especially high level of trust in the medical establishment. Years or even decades might go by before an intended recipient would receive a kidney in exchange for the donor's giving one to a stranger.").

[199] *See* discussion *supra* Part IV.C.

[200] *See* discussion *supra* Part III.