

# Shortening the Line

*Using offer-acceptance criteria built into UNet<sup>SM</sup> can help prevent wastage*

HEY! I'LL  
TAKE IT!



BY DARREN STEWART AND KIMBERLY TAYLOR

If every organ could be offered right away to the most appropriate candidate listed at a transplant center certain to accept it, an organ distribution system would be operating at near-perfect efficiency. Back in the real world, however, the process of getting the right organ to the right recipient can too easily fall short of “operational nirvana.”

Organ allocation policies are regularly fine-tuned, primarily to assure that the most-suitable candidates—in terms of medical urgency, equity and other significant considerations—rise to the top of the list and receive offers. But what ensures that offers go only to candidates and centers willing to accept, or at least consider, them?

That’s where the offer-acceptance criteria built into UNet<sup>SM</sup> can have a big impact...that is, of course, if these tools for screening unwanted offers are used.

## UNTAPPED POTENTIAL

When listing a candidate, transplant centers are required by UNet to enter a maximum acceptable donor age as well as several other mandatory acceptance criteria. That means that some degree of elective screening is in place for all candidates.

But, practically speaking, a maximum donor age set to “99” doesn’t accomplish much in terms of reducing unwanted offers.

In fact, several analyses conducted by the UNOS research department on behalf of the OPTN/UNOS operations and safety committee, have revealed that the criteria are underutilized—and that significant opportunities exist to improve the screening of organ offers simply by enhanced use of the existing system.

Those findings are confirmed in a recent study by Massie et al.<sup>1</sup>: “For an organ likely to be accepted by very few transplant centers, an efficient system for skipping uninterested centers is required...Indeed there is such a system in place for specifying organ acceptance criteria, but our findings suggest that this system is not being efficiently utilized.”

Though the current system has its limitations (it is, for the most part, a one-factor-at-time knock-out criterion structure) there is plenty of untapped potential for improving placement of so-called marginal organs. Increasing the efficiency of placing organs, or “getting past the no’s,” is crucial for several reasons.

## EVERY MINUTE COUNTS

First, delays in placement can lead directly to unnecessary organ discard, an unwelcome prospect in an era in which demand for organs far outpaces supply.

“One of the struggles in timely organ placement of medically complex donor organs,” says Charles Alexander, RN, M.S.N., M.B.A., “is our ability to reach the appropriate patients on the national waiting list.” Alexander, UNOS president, also is CEO of the Living Legacy Foundation of Maryland in Baltimore.

“The risk/benefit of an organ offer differs by waiting recipient, and an organ offer not appropriate for most patients may be acceptable for others on the waiting list,” he added. “OPOs are not equipped to make those determinations, and it is therefore imperative that we have recipient listing practices that allow OPOs to work through the national waiting list quickly to reach those waiting recipients.”

Even when an organ isn’t discarded, accumulated time from an organ refusal leads to increased ischemic time, which may reduce the quality of the organ and negatively impact the transplant outcome for the recipient. Every extra minute or hour spent trying to place the organ is lost time to the OPO, not to mention potentially wasted transplant center resources spent answering calls or electronic notifications for unwanted organs.

“This is an element of the system that can be improved,” Alexander added, “and some of the solutions are well within our control.”

## THE EFFECTIVE SCREENING WORKING GROUP

To address the problem—especially since DonorNet<sup>®</sup> allows multiple offers to be sent simultaneously to many centers—the OPTN/UNOS operations and safety committee has created an “effective screening working group” (ESWG).

Co-chaired by Jeffrey Orłowski, M.S., CPTC, OPO representative to the OPTN/UNOS executive committee, and Robert Metzger, M.D., UNOS director of medical affairs, the working group seeks to increase the efficiency of distributing hard-to-place organs by improving the use of screening elements and tools. Dr. Metzger says that improving the use of these “marginal, or ECD [expanded criteria donor] organs” is one of the main goals of the ESWG.

“It was postulated that perhaps DonorNet<sup>®</sup> itself would help to solve this problem by OPOs having the ability to ‘blast’ offers,” Dr. Metzger recalls. “But we all know what happened...those ‘blast offers’ led to pushback from the transplant centers...So DonorNet didn’t substantially expedite the placement of more marginal organs.”

The charge of the ESWG, he explains, is to “look at ways that the system might be able to improve its efficiency without a new allocation policy. The idea is to shorten the match run list to only those candidates at transplant centers who might consider an offer from a donor with certain specific characteristics.”



Of course, more effective screening does not always mean “narrowing” or “tightening” the screening elements. In some cases, loosening the criteria may be appropriate.

Work by Merion et al.,<sup>2</sup> showed that certain kidney candidates — such as those over 40 with diabetes, or with long wait times — are more likely to benefit from ECD transplantation as compared to certain other candidates. Grams et al.,<sup>5</sup> however, revealed that from 2003 to 2008, just under 50 percent of candidates predicted to benefit from an ECD kidney were actually on the “ECD list”; the rest were screened off of all ECD match runs.

Some transplant centers may benefit from re-evaluating their candidates’ waitlist records to ensure that those likely to benefit from an ECD kidney are listed as willing to accept one.

#### SPREADING THE WORD

ESWG initiatives being planned or already under way include providing a screening usage report and accompanying survey to centers that may benefit most from more fully utilizing the screening system, and exploring possible system enhancements, such as incorporating the kidney donor profile index (KDPI) as a new acceptance criterion.

The KDPI, which is derived from the kidney donor risk index (KDRI)<sup>4</sup>, measures the quality of a kidney donor from factors such as donor age, creatinine, cause of death, diabetes status, etc. The KDPI summarizes many dimensions of information into a single number to aid decision-making. KDPI can be thought of as a refinement to the ECD criterion.

“We are hoping to use new potential elements of organ allocation policies,” says Kenneth A. Andreoni, M.D., associate professor of surgery at the Ohio State University Medical Center, “to help with more efficient organ placement and early education of the transplant community.” The first attempt to help in this regard, he added, is use of the KPDI by incorporating it into DonorNet®.


Dr. Andreoni is chair of the OPTN/UNOS kidney transplantation committee and a member of the ESWG.

The ESWG also plans to offer training to increase screening know-how. Do you want to better understand, for example, the difference between “donor acceptance criteria” and “kidney minimum acceptance criteria”? Didn’t realize there was a difference? Then look for the following in coming days:

- educational webinars
- articles in the member consolidated e-newsletter
- presentations at regional meetings and other venues, and more.

To varying degrees, transplant centers already take advantage of some of the available offer-acceptance criteria as well as associated tools, such as “listing defaults” and “waitlist update utility.” In its efforts to understand why the tools are underutilized, the ESWG has come to believe that confusion about terminology and functionality of the screening system may be at least partly to blame, and the initiatives listed in the previous paragraph are designed to help rectify that confusion.

The ESWG also believes that measurable gains in system efficiency are within reach. Along with those gains will come more organs saved from discard, fewer unwanted calls or iPhone alerts and, most critically, additional recipients benefiting from the gift of life.

That’s moving closer toward “nirvana,” wouldn’t you say? 

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#### REFERENCES

1. Massie AB, Zeger SL, Montgomery RA, Segev DL. The effects of DonorNet 2007 on kidney distribution equity and efficiency. *AJT*. 2009;9:1550-1557.
2. Merion RM, Ashby VB, Wolfe RA, Distant DA, Hulbert-Shearon TE, Metzger RA, Ojo AO, Port FK. Deceased-donor characteristics and the survival benefit of kidney transplantation. *JAMA*. 2005;294:2726-2733.
3. Grams ME, Womer KL, Ugarte RM, Desai NM, Montgomery RA, Segev DL. Listing for expanded criteria donor kidneys in older adults and those with predicted benefit. *AJT*. 2010;10:802-809.
4. Rao PS, Schaubel DE, Guidinger MK, Andreoni KA, Wolfe RA, Merion RM, Port FK, Sung RS. A comprehensive risk quantification score for deceased donor kidneys: the kidney donor risk index. *Transplantation*. 2009;8:231-236.