Changes in Kidney Transplant Allocation

The new system starts on December 4, 2014
United Network of Organ Sharing

www.unos.org

Established March 21, 1984

Independent, non-profit

Unites donation and transplantation

Develops and ensures compliance of regulatory policies
Why change the system?

• The old system:
  – Has variability in matching (biologic and antibodies)
  – Results in unrealized life years (providing an older kidney to a younger individual) and high re-transplant rates
  – Does not address high organ discard rate
Prediction:

The new KAS will result in approximately **8,000** additional life years achieved annually from the current pool of deceased donor kidneys

optn.transplant.hrsa.gov
How was the new system developed?

- UNOS Kidney Transplant Committee
- 10 years of changes
- Patient and family group feedback
- Professional transplant societies
- Individual transplant programs
- 11 US regions
New Kidney Allocation System

1. New donor metric: KDPI score
2. New recipient metric: adult EPTS score
3. Improved matching; new points scale for sensitized patients
4. Waiting time adjustments back to dialysis start date
5. Greater access for blood type B
Change #1: Donor KDPI Score

- **Kidney Donor Profile Index (KDPI)**
  - Combines 10 donor factors into a single number
  - Summarizes the potential risk of graft failure
  - Ranges from 0-100%
  - Eliminates previous Extended Criteria Donor (ECD) and Standard Criteria Donor (SCD) definitions
  - NOT intended to serve as the only metric for determining donor suitability
Donor Characteristics in KDPI

- Age
- Height
- Weight
- Ethnicity
- History of Hypertension
- History of Diabetes
- Serum Creatinine
- Hepatitis C Viral Status
- Donation after Cardiac Death (DCD) Status
Living donation is always the best option. For more information on living donation, click HERE.
Change #2: Recipient EPTS Score

- **Estimated Post Transplant Survival Score (EPTS)**
  - Combines four factors into a single number
  - Ranges from 0-100%
  - Helps achieve better kidney longevity matching
  - **Characteristics:**
    - ✓ Age
    - ✓ Time on dialysis
    - ✓ Prior solid organ transplant
    - ✓ Diabetes status
KDPI and EPTS Matching

- The new system is designed to improve longevity and give the best 20% of donor kidneys to the best 20% of recipient pool
- Patient waiting time may be affected by their willingness to accept offers from higher KDPI kidneys
- The transplant center and patient must balance the risks and benefits that come with a higher KDPI score
- A patient who has a higher EPTS score may benefit from accepting a kidney with a higher KDPI score (>85%)
Change #3: Updated Points System

- Transplant Candidates on the Waitlist will be allocated points to determine priority as follows:
  - Waiting: 1 point a year (fractionated)
  - Age 0-10 and a zero mismatch: 4 points
  - Age 11-17 and a zero mismatch: 3 points
  - Age 0-10 and the KDPI is <35%: 1 point
  - Prior living donor: 4 points
  - Zero HLA-DR mismatch: 2 points
  - Single HLA-DR mismatch: 1 point
  - Sensitized patients: per established scale (see next slide)
<table>
<thead>
<tr>
<th>If the candidate’s CPRA score is:</th>
<th>Then the candidate receives this many points:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>1-9</td>
<td>0.00</td>
</tr>
<tr>
<td>10-19</td>
<td>0.00</td>
</tr>
<tr>
<td>20-29</td>
<td>0.08</td>
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<tr>
<td>30-39</td>
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<tr>
<td>70-74</td>
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<td>75-79</td>
<td>1.58</td>
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<tr>
<td>80-84</td>
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<tr>
<td>99</td>
<td>50.09</td>
</tr>
<tr>
<td>100</td>
<td>202.10</td>
</tr>
</tbody>
</table>
Change #4: Wait Time Credit for Dialysis

Waiting time will revert back to the **initiation of dialysis**

- Patients who are currently on the waiting list will get credit back to their first day of dialysis
- Patients who had a GFR of \(< \text{or} = 20\) will maintain but not gain time even if their GFR was \(< \text{or} = 20\) prior to listing
- New patients being listed who are already on dialysis will get credit for waiting time back to their dialysis start date
- There is still an advantage to pre-emptive referral/transplant!
- In the new system, transplant programs cannot tell a patient where they are on the waiting list. Only average waiting times can be shared.
## Change #5: Blood Type B Recipients

<table>
<thead>
<tr>
<th>Kidneys from donors with:</th>
<th>Allocated to recipient with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Type O</td>
<td>Blood Type O</td>
</tr>
<tr>
<td></td>
<td>For zero mismatch in PRA &gt; 98% w/different blood type</td>
</tr>
<tr>
<td>Blood Type A</td>
<td>Blood Type A or AB</td>
</tr>
<tr>
<td>Blood Type B</td>
<td>Blood Type B</td>
</tr>
<tr>
<td></td>
<td>For zero mismatch in PRA &gt; 98% w/different blood type</td>
</tr>
<tr>
<td>Blood Type AB</td>
<td>Blood Type AB</td>
</tr>
<tr>
<td>Blood Type non-A1 and non-A1B</td>
<td>Blood Type B who meet all the following:</td>
</tr>
<tr>
<td></td>
<td>- Meets UW clinical criteria</td>
</tr>
<tr>
<td></td>
<td>- Signed written consent</td>
</tr>
<tr>
<td></td>
<td>- Candidacy has been confirmed every 90 days</td>
</tr>
</tbody>
</table>

**Increased access for Blood Type B!**
Frequently Asked Questions

• If I am already on the list when the new system goes into effect, how will it affect me?
  – The new system has been carefully created to help people who need more access to kidney offers without significantly affecting the needs of others. If you are already listed, you do not need to be re-evaluated or re-listed. If you have dialysis time prior to when you were added to the waiting list, this time will automatically be added to your wait time.

• How does the waiting time work if I am on more than one waiting list?
  – Primary waiting time transfers will still be permissible in the new system. If you began to accrue waiting time based on a GFR/CrCl value prior to starting dialysis, you can transfer your waiting time to your primary transplant center. If you began to accrue waiting time based on start of dialysis, then the waiting time will be the same at each center (assuming that each center enters the same dialysis start date).
Frequently Asked Questions

• **How will this affect the average waiting time for my blood type?**
  – At this time, we do not know how overall waiting times will be affected. Experts think that the changes will not affect waiting times for a majority of the people on the waiting list. They anticipate that people with high antibody levels (98-100%) will have better access to a kidney, as will people who are expected to have more life years.

• **Now that waiting time includes all pre-registration dialysis time, is there any need for early referral?**
  – Early referral and listing are still the best practice under the new allocation system, since patients with a shorter duration on dialysis prior to transplant tend to have better outcomes. While waiting time is now being calculated to include pre-registration dialysis time, the GFR criterion remains the same. Patients can accrue waiting time points based on this criterion alone. Like the current allocation system, the new system prioritizes zero HLA-ABDR mismatches and patients who are listed early will have access to any such offers, even prior to accumulating significant time on dialysis. It’s also important to remember that candidates must be listed prior to their 18th birthday in order to receive pediatric priority.
More Information

- UW Health Living Kidney Donor Program
- UNOS Patient Brochure
- YouTube Video