Equity in Access to Transplant

A key goal (https://optn.transplant.hrsa.gov/governance/strategic-plan/goal-2/) of the OPTN is providing equity in access to transplants. OPTN committee volunteers work to increase equity in access to transplant by developing data-driven, patient-centric organ allocation policies that go through a transparent public comment process.

This dashboard shows how the OPTN monitors trends related to equitable access to deceased donor transplants among active waiting list candidates in the U.S.

Kidney (https://insights.unos.org/equity-in-access/#) | Liver | Heart | Lung | System-level

What is health equity?

Health equity is the ability for everyone to have a fair and just opportunity to be as healthy as possible, no matter their social position. Multiple factors, including biological, interpersonal, community, and societal factors, contribute to a person's social position.

In order to increase equity in transplant, we must understand the factors that can impact a waitlist candidate's ability to receive a transplant. These factors can be biological or social, and can include:

- Age
- Blood type
- Body mass index (BMI)
- Citizenship
- Community Risk Score
- Education level
- Gender
- Insurance type
- Race or ethnicity
- Rural vs. urban

How we measure equity

How is access to transplant quantified? This OPTN data dashboard monitors equity in access to transplant through an Access to Transplant Score (ATS).

The ATS follows the National Institute on Minority Health and Health Disparities' Minority Health and Health Disparities Framework, which lays out potential conditions that can influence a person's health outcomes. For example, research has shown heart transplant recipient outcomes differ when a recipient has private compared with public insurance. Learn more about the NIMHD framework.

The ATS summarizes into a single number an active candidate's relative likelihood of receiving a deceased donor transplant. Explore all the factors involved in an ATS score.

The Access to Transplant Score (ATS)

FIGURE 1

An equitable system

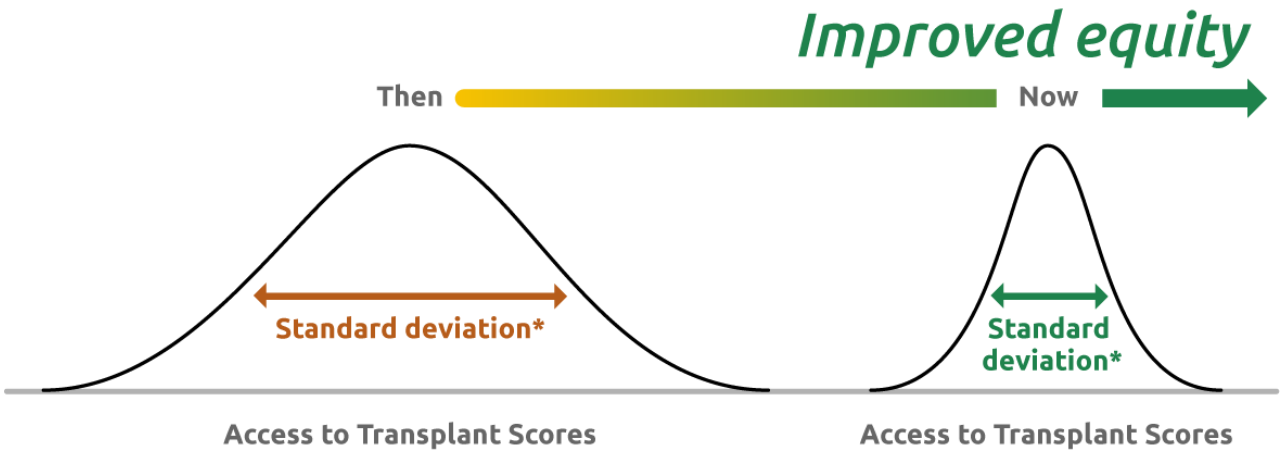
The goal? To decrease ATS score variation over time

The ATS is a single score that indicates a waitlist candidate's likelihood of receiving a deceased donor transplant in the United States. It involves various individual and community level factors from the NIMHD framework. These factors are not limited to organ transplantation—they contribute to health disparities across multiple health outcomes.

This dashboard uses the OPTN's Access to Transplant Score (ATS) and equity monitoring methodology to explore how different factors impact how long waitlist candidates have to wait to receive a deceased donor transplant. The dashboards shows data for four different organ allocation systems: lung, heart, liver, and kidney.

The amount of variation in these scores among waiting list candidates reflects the degree to which the respective organ allocation system is equitable. If the variation in these scores decreases over time, the system has become more equitable in terms of access to deceased donor transplantation.

FIGURE 2



**The standard deviation measures the spread in patients' access to transplant scores, or how wide the bell curve is. Lower values reflect greater equity, and we track changes in this measure over time. Watch explanatory video on standard deviation (https://www.youtube.com/watch?v=mk8tOD0t8M0).*

Importantly, these scores do not reflect transplant access differences intended by policy to address inequities in patients' ability to wait for a transplant due to being more or less medically urgent. For example, priorities awarded to candidates for having a high lung allocation score (LAS) or model for end stage liver disease (MELD) score are not included in the ATS.

Examining policy impacts

A lower spread of ATS scores mean that there are fewer differences among waitlist candidates and, in turn, less disparity. A higher spread of ATS scores mean that there are more differences in ATS scores across waitlist candidates and, in turn, more disparity.

This dashboard allows us to examine the impact of previous policies and practices and consider how they can be improved to further promote equity in access to transplant. For example, changes in organ allocation policies, as well as organ offer acceptance patterns at transplant programs, may impact equity metrics over time.

Current limitations

The current version of the dashboard focuses exclusively on equity in access to deceased donor transplants among active waitlisted candidates. However, disparities in being added to the waiting list in the first place, as well as receiving a living donor transplant, may also exist and are important to recognize and address.

Figures 3 and 4

FIGURE 3: NIMHD Framework

		Levels of Influence*			
		Individual	Interpersonal	Community	Societal
Domains of Influence (Over the Lifecourse)	Biological	Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	Community Environment Community Resources	Societal Structure
	Sociocultural Environment	Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		Individual Health	Family/ Organizational Health	Community Health	Population Health

National Institute on Minority Health and Health Disparities, 2018
*Health Disparity Populations: Race/Ethnicity, Low SES, Rural, Sexual and Gender Minority
Other Fundamental Characteristics: Sex and Gender, Disability, Geographic Region

National Institute on Minority Health and Health Disparities (2017). NIMHD Research Framework. Retrieved from https://www.nimhd.nih.gov/about/overview/research-framework/ (https://www.nimhd.nih.gov/about/overview/research-framework/). Accessed on March 22, 2021.

FIGURE 4: NIMHD Framework

		Levels of Influence*			
		Individual	Interpersonal	Community	Societal
Domains of Influence (Over the Lifecourse)	Biological	1 Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	4 mmunity Environment mmunity Resources	Societal Structure
	Sociocultural Environment	2 Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	3 Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		Individual Health	Family/ Organizational Health	Community Health	Population Health

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1. Individual - Biological

- Blood Type

3. Individual - Health care system

- Insurance type

- Immune sensitization (CPRA)
- Height, weight, body mass index
- Prior transplant recipient
- Diagnosis

2. Individual - Sociocultural

- Age
- Citizenship
- Race/Ethnicity
- Education
- Gender

4. Community - Environment

- Community risk score
- Urban vs. rural community
- Distance to transplant center
- Donation service area (DSA)

Resources

Find additional resources about equity in access to transplant here.