

Organ Utilization Rate Measure Fact Sheet

Version September 2026



Organ Utilization Rate Measure

The rate of organs transplanted from the total number of organs recovered for transplant from donors in the Organ Procurement Organization's (OPO) Donation Service Area (DSA) in a calendar year.

Organ Utilization Rate Per 100:

$$\frac{\text{Number of Organs Transplanted}}{\text{Number of Organs Recovered for Transplant from Donors in an OPO's DSA in a Calendar Year}} \times 100$$

Overview

AOPO and Quality Improvement

The Association of Organ Procurement Organizations (AOPO) leads the nation's organ donation community with a clear mission: save more lives. Central to that mission is a commitment to continuous quality improvement—advancing donation and transplantation practices, collaborating with stakeholders, and sharing best practices across its OPO member network.

In 2025, AOPO launched the Organ Procurement Organization Performance Measurement Project to redefine how OPO performance is measured. The project aims to create independently validated, scientifically sound, data-driven metrics aligned with the Centers for Medicare & Medicaid Services (CMS) measurement framework—promoting quality improvement, transparency, trust, and stakeholder alignment while accounting for medically complex donors and the operational realities of the donation and transplantation system.

Background on Organ Utilization Rate

Organ transplantation is the most effective treatment for many patients with end-stage organ failure; however, the demand for transplantable organs continues to far exceed the available supply (Herrera-Gayol et al., 2025; OPTN, 2024). There is a scarcity of donated organs and significant mortality and morbidity experienced by patients awaiting transplantation (Aubert et al., 2019; OPTN, 2024), especially in the African American

community (Simpson et al., 2024). Maximizing the use of organs recovered from deceased donors is a critical objective of the organ donation and transplantation system.

A substantial proportion of potentially transplantable organs may not be utilized because of clinical, logistical, operational, or organizational factors (Brennan et al., 2019; Herrera-Gayol et al., 2025). Variability in organ acceptance practices, donor management approaches, allocation efficiency, transportation challenges, and risk tolerance among transplant centers can influence whether available organs are transplanted or not utilized (Qannus et al., 2025; Reese et al., 2016). This measure provides valuable information to OPOs and allows them to collect, study, and address the reasons for non-utilization, which change over time.

This measure highlights opportunities to reduce avoidable organ nonuse while maintaining patient safety and transplant outcomes. As such, it serves as an important indicator of stewardship of donated organs and of the collective effectiveness of the organ recovery and transplant system.

Improved organ utilization contributes to better patient outcomes, more effective stewardship of donated organs, greater efficiency within the transplant system, and enhanced public confidence that donated organs are being used to their fullest potential.

Organ Utilization Rate: Why It's a Priority

- + Despite increases in organ donation and transplantation activity, demand continues to exceed supply, resulting in prolonged waiting times and preventable deaths among transplant candidates (Kwong, 2020).
- + Increasing utilization of available organs is associated with improved access to transplantation and fewer deaths while waiting for an organ offer (Wey et al., 2018). As a result, organ utilization serves as a meaningful outcome that is strongly linked to the ultimate goals of transplantation programs: increasing transplantation rates and improving patient survival (Ruch et al., 2025; Wey et al., 2018).
- + Researchers have concluded that substantial opportunities exist to increase transplantation through changes in acceptance behavior and allocation practices rather than through increases in donor supply alone (Brennan et al., 2019; Mohan et al., 2018). These findings support the use of organ utilization as a quality measure because it captures system performance beyond donor availability and identifies areas where improvements in practice may increase the number of organs transplanted.
- + Because increased organ utilization directly increases the number of transplants performed from the existing donor pool, improvements in the measure are expected to contribute to greater access to transplantation, reduced waitlist mortality, improved patient survival, and enhanced stewardship of donated organs.

Measure Specifications

The Organ Utilization Rate measure calculates the number of organs transplanted per 100 recovered organs from donors with at least one organ recovered for the purpose of transplant within the OPO's DSA in a calendar year. It is calculated at the OPO level and expressed as a rate per 100 organs. See the definitions section of this document for relevant terms and definitions.

Numerator and denominator data for this measure are drawn from the Scientific Registry of Transplant Recipients (SRTR). OPOs will submit the data for this measure to Organ Procurement & Transplantation Network (OPTN) as they usually do. AOPO will retrieve the data from OPTN to calculate the measure. Refer to the AOPO Data SOP document for the Organ Utilization Rate measure for details on data standardization, variable format, and measure calculation.

Organ Utilization Rate Per 100:

Numerator

- ▶ The numerator is the number of organs transplanted from donors in the calendar year.
- ▶ Organ transplants include solid organ transplants and islet infusions.
- ▶ Numerator data source: SRTR.

Number of Organs Transplanted

Number of Organs Recovered for Transplant from Donors in an OPO's DSA in a Calendar Year

x 100

Denominator

- ▶ The denominator is the number of organs recovered for transplant from donors in the OPO's DSA in the calendar year.
- ▶ Organs included must be recovered for transplant, not for other purposes.
- ▶ A donor from whom organs were recovered only for purposes other than transplant does not contribute to the denominator.
- ▶ Donors are attributed to the calendar year based on the time of death recorded on the death certificate.
- ▶ Denominator data source: SRTR.

Definitions

Calendar Year

Time between 12:00 a.m. on January 1 of a calendar year and 11:59 p.m. on December 31 of that same year. For SRTTR data, a death is attributed to the calendar year based on the time of death as recorded on the death certificate.

Donor

A deceased individual from whom at least one organ was recovered for transplant, regardless of whether the organ was transplanted. An individual would also be considered a donor if only the pancreas is procured and used for islet cell research or transplantation.

Organ

Human kidney, heart, lung, liver, pancreas, or intestine. Double or en bloc kidneys and double or en bloc lungs count as two organs. Organ segments count as an individual organ.

Organs Recovered for Research

The number of organs recovered with the intent of transplant and subsequently determined to be unsuitable and then designated for research; or organs recovered with the intent of research. Research must occur at an institution or organization that has an ongoing program of research to improve transplantation or support the discovery of cures for organ-related conditions, such as diabetes.

Recovered Organs

Organs recovered for the purpose of transplant, regardless of whether they were transplanted or used successfully.

Transplant

Organ transplants include solid organ transplants and islet infusions. An organ transplant begins at the start of organ anastomosis or the start of an islet infusion.

An organ transplant procedure is complete when any of the following occurs:

- The chest or abdominal cavity is closed, and the final skin stitch or staple is applied.
 - The transplant recipient leaves the operating room, even if the chest or abdominal cavity cannot be closed.
 - The islet infusion is complete.
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Transplant Organ

Human kidney, heart, lung, liver, pancreas, or intestine that was recovered from a donor and transplanted into a recipient.

Resources

- ▶ Aubert, O., Reese, P. P., Audry, B., et al. (2019). *Disparities in acceptance of deceased donor kidneys between the United States and France and estimated effects of increased US acceptance*. *JAMA Internal Medicine*, 181(10), 1365–1374. <https://doi.org/10.1001/jamainternmed.2019.2322>.
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- ▶ Herrera-Gayol, A., Sandal, S., Gondolesi, G., Askar, M., Shankar, H., Kute, V., Dwyer, K., Dhital, K., Cantarovich, M., System-Level Barriers Reducing Access to Transplantation: Results of a Global Survey, *American Journal of Transplantation*, Volume 25, Issue 8, Supplement 1, 2025, Pages S979-S980, ISSN 1600-6135, <https://doi.org/10.1016/j.ajt.2025.07.2331>.
- ▶ Kwong, A. J., Kim, W. R., Lake, J. R., et al. (2020). OPTN/SRTR 2018 annual data report: Liver. *American Journal of Transplantation*, 20(Suppl. s1), 193–299. <https://doi.org/10.1111/ajt.15674>.
- ▶ Mohan, S., Chiles, M. C., Patzer, R. E., et al. (2018). Factors leading to the discard of deceased donor kidneys in the United States. *Kidney International*, 94(1), 187–198. <https://doi.org/10.1016/j.kint.2018.02.016>.
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- ▶ Ruch, B., Narayanan, A., Chotai, P., Zhao, K., Axelrod, D., & Stewart Lewis, Z. (2025). Transitioning to aggressive organ acceptance: A small center's approach for liver transplant. *American Journal of Transplantation*, 25(8), Supplement 1. <https://doi.org/10.1016/j.ajt.2025.07.1774>.
- ▶ Simpson, Dineen C., Joy E. Obayemi, Kiarri N. Kershaw, John E. Franklin, and Daniela P. Ladner. 2024. The African American Transplant Access Program: Mitigating Disparities in Solid Organ Transplantation. *NEJM Catalyst Innovations in Care Delivery* 5 (9). <https://doi.org/10.1056/CAT.24.0140>.
- ▶ Wey, A., Valapour, M., Skeans, M. A., et al. (2018). Heart and lung organ offer acceptance practices of transplant programs are associated with waitlist mortality and organ yield. *American Journal of Transplantation*, 18(8), 2061–2070. <https://doi.org/10.1111/ajt.14885>.