

Health Equity Coverage Recommendation Form

Title: Health Equity in Organ Transplants

Date of Last Review: 9/1/24

Research Section

Background

According to the [Centers for Disease Control and Prevention \(CDC\)](#), an organ transplant is a lifesaving procedure in which tissue, or an organ is transferred from one area of a person’s body to another area, or from one person (the donor) to another person (the recipient). In the United States, the most commonly transplanted organs are the kidney, liver, heart, lungs, pancreas, and intestines. On any given day there are around 100,000 people on the active waiting list for organs, but only approximately 14,000 deceased organ donors in 2021, with each providing on average 3.5 organs. Living donors provide on average only around 6,000 organs per year.¹

Inequities discussed on the [Office of Minority Health Website](#):²

[Organ Transplants and Black/African Americans](#):

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- African Americans make up the largest BIPOC group in need of an organ transplant.
- The number of organ transplants performed on non-Hispanic Black individuals in 2021 was 27.8 percent of the number of non-Hispanic Black individuals currently waiting for a transplant. The number of transplants performed on non-Hispanic white individuals was 47.2 percent of the number currently waiting.
- While 28.6 percent of the total candidates currently waiting for transplants are non-Hispanic Black individuals, they comprised 15.1 percent of organ donors in 2021.
- In 2021, 81.3 percent of donor organs from non-Hispanic Black Americans were from deceased donors.
- In 2021, 18.7 percent of non-Hispanic Black Americans were living donors as compared to 33.6 percent of white living donors.
- Although the total number of non-Hispanic white individuals on organ transplant waiting lists is about 1.4 times greater than that of non-Hispanic Black individuals, the number of candidates waiting for a kidney transplant is almost the same between non-Hispanic Black and non-Hispanic white Americans.

- Non-Hispanic Black Americans have higher rates of diabetes and high blood pressure than the non-Hispanic white population. These conditions are known to put patients at risk for organ failures.

[Organ Transplants in Asian Americans:](#)⁴

- The number of organ transplants performed on Asian Americans in 2020 was only 24.7 percent of the number of Asian Americans currently waiting for a transplant. The number of transplants performed on white Americans was 48.8 percent of the number currently waiting.
- While 8.5 percent of the total candidates currently waiting for transplants are Asian individuals, they comprised 3.1 percent of organ donors in 2020.
- In 2020, 43.1 percent of the organs recovered from Asian Americans came from living donors as compared to 33.4 percent of white living donors.
- Diabetes and heart disease are less prevalent among Asian Americans than other minority groups. Even so, they suffer significantly from liver disease and hepatitis. These conditions are known to put patients at risk for organ failures.

[Organ Transplants and Hispanic/Latino Americans:](#)⁵

- The number of organ transplants performed on Hispanic Americans in 2020 was about 30 percent of the number of Hispanic Americans currently waiting for a transplant. The number of transplants performed on white Americans was 48.8 percent of the number currently waiting.
- While 20.5 percent of the total candidates currently waiting for transplants are Hispanic Americans, they comprised 14.6 percent of organ donors in 2020.
- Almost 69 percent of organs recovered from Hispanic patients in 2020 were from deceased donors.
- Both Hispanic men and women have chronic liver disease rates that are twice that of the white population, and they are almost twice as likely to die from chronic liver disease as compared to the white population.
- Hispanic Americans have high rates of diabetes and heart disease. Mexican Americans, in particular, suffer disproportionately from obesity, which contributes to diabetes, hypertension and heart disease. These conditions are known to put patients at risk for organ failures.
- Language barriers also negatively affect patient access to health care as well as adequate health information.

Review of current, peer-reviewed evidence from established sources

According to [Ebele and Young \(2019\)](#)⁶ African Americans have a 2- to 4-fold greater incidence of end-stage kidney disease (ESKD) than white Americans, which has long raised the possibility of a genetic cause for this disparity. Recent advances in genetic studies have shown a causal association of polymorphisms at the apolipoprotein L1 gene (APOL1) with the markedly increased risk for the nondiabetic component of the overall disparity in ESKD in African Americans. Although APOL1-associated kidney disease is thought to account for a substantial proportion of ESKD in African

Americans, not all the increased risk for ESKD is accounted for, and a complete cataloging of disparities in genetic causes of ESKD eludes our current understanding of genetic-associated kidney disease.

Kidney transplantation offers better mortality and quality of life outcomes to patients with end-stage renal failure compared to dialysis according to [Zhang and Mathur \(2023\)](#).⁷ Specifically, living donor kidney transplantation is the best treatment for end-stage renal disease, since it offers the greatest survival benefit compared to deceased donor kidney transplant or dialysis. However, not all patients from all racial/ethnic backgrounds enjoy these benefits. While Black and Hispanic patients bear the predominant disease burden within the United States, they represent less than half of all kidney transplants in the country. Other factors such as cultural barriers that proliferate myths about transplant, financial costs that impede altruistic donation, and even biological predispositions create a complex maze and can also perpetuate care inaccessibility. Therefore, blanket efforts to increase the overall donation pool may not extend access to vulnerable populations, who may require more targeted attention and interventions. This review uses US kidney transplantation data to substantiate accessibility differences amongst racial minorities as well as provide examples of successful institutional and national systemic level changes that have improved transplantation outcomes for all.

[Goyes et al. \(2021\)](#)⁸ notes that non-Hispanic white Americans and Hispanic Americans on a wait list for liver transplantation were reviewed over a period of five years. On competing risk analysis, Hispanic patients had a higher risk of being removed from the waitlist for death or clinical deterioration compared to their counterpart (SHR 1.23, 95% CI 1.13-1.34; P < 0.001).

A study by [Salim et al. \(2014\)](#)⁹ discusses how outreach interventions such as television and radio media campaigns and culturally sensitive educational programs were implemented in high schools, churches, and medical clinics in target neighbors with a high percentage of Hispanic Americans in California. In 6 years, there was a significant increase in consent rate for organ donation among Hispanic Americans: from 56% in 2005 to 83% in 2011.

Review of clinical practices guidelines from professional associations and societies in regard to these findings

CDC- Transplant Safety:¹⁰

- Every organ donor can save as many as eight lives and enhance 75 more.
- While rare, an infection can be transmitted through an organ transplant from a donor to a recipient. This occurs in <1% of all transplants.
- Several safety measures are in place to lessen the risk of disease transmission to ensure that every usable organ is used safely.

Do any of these findings relate to any of our current policies?

None of the above findings are applicable to any of our current medical policies at this time.

Summary

There is a disproportionate amount of minority populations affected with the need for organ donation, while the percentage of organs donated by minority populations remains lower than that of non-Hispanic white Americans.

Furthermore, there is evidence that marginalized populations have an increased risk of being removed from organ donation wait lists due to death and clinical deterioration. Culturally sensitive outreach programs have been shown to increase organ donation by minority populations.

There is a lack of clinical practice guidelines or evidence on why marginalized groups experience a need for organ donation at a higher rate than their white counterparts. Causes of the higher prevalence of organ failure in these populations are likely multifactorial and complex, with both genetic and environmental factors. Additionally, these groups also have an increased rate of risk factors- such as smoking, diabetes, and high blood pressure (which are also less likely to be controlled). Medication adherence and disparities in healthcare access have also been indicated as some of the barriers that continue to affect these populations.

Unfortunately, there remains no specific recommendations to guide care and reduce gaps in these minority populations. For this reason, there are no distinct utilization and medical necessity criteria for vulnerable populations regarding the need for and subsequent organ transplantation.

Recommendation:

No recommended health equity updates to policies at this time. We will continue to review data and professional organization recommendations for future health equity updates.

References

1. Centers for Disease Control and Prevention. About Transplant Safety. <https://www.cdc.gov/transplant-safety/about/index.html>. Published 2024. Accessed 8/20/2024.
2. Health USDoHaHS-OoM. Minority Population Profiles. <https://minorityhealth.hhs.gov/minority-population-profiles>. Published 2024. Accessed 8/20/2024.
3. Health USDoHaHS-OoM. Organ Transplants and Black/African Americans. <https://minorityhealth.hhs.gov/organ-transplants-and-blackafrican-americans>. Published 2024. Accessed 8/20/2024.
4. Health USDoHaHS-OoM. Organ Transplants and Asian Americans. <https://minorityhealth.hhs.gov/organ-transplants-and-asian-americans>. Published 2024. Accessed 8/20/2024.

5. Health USDoHaHS-OoM. Organ Transplants and Hispanic/Latino Americans. <https://minorityhealth.hhs.gov/organ-transplants-and-hispaniclatino-americans>. Published 2024. Accessed 8/20/2024.
6. Umeukeje, E. M., & Young, B. A. (2019). Genetics and ESKD Disparities in African Americans. *American journal of kidney diseases : the official journal of the National Kidney Foundation*, 74(6), 811–821. <https://doi.org/10.1053/j.ajkd.2019.06.006>
7. Zhang C, Mathur AK. Breaking Barriers and Bridging Gaps: Advancing Diversity, Equity, and Inclusion in Kidney Transplant Care for Black and Hispanic Patients in the United States. *Transpl Int*. 2023;36:11455. Published 2023 Sep 27. doi:10.3389/ti.2023.11455
8. Goyes D, Danford CJ, Nsubuga JP, Bonder A. Waitlist mortality and transplant free survival in Hispanic patients listed for liver transplant using the UNOS database. *Ann Hepatol*. 2021;23:100304. doi:10.1016/j.aohp.2021.100304
9. Salim A, Ley EJ, Berry C, et al. Effect of community educational interventions on rate of organ donation among Hispanic Americans. *JAMA Surg*. 2014;149(9):899-902. doi:10.1001/jamasurg.2014.1014
10. Centers for Disease Control and Prevention. Clinical Guidance for Transplant Safety. <https://www.cdc.gov/transplant-safety/hcp/clinical-guidance/index.html>. Published 2024. Accessed 8/20/2024.

CORE Revision History Section

DATE	SUMMARY OF CHANGES
08/20/2024	Initial review.

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