



Global Organ Donation 2023

A scientific summary of the 2023 reporting cycle of the Global Observatory on Donation and Transplantation

ABSTRACT

The 2023 reporting cycle of the Global Observatory on Donation and Transplantation recorded 172,397 solid organ transplants across 93 Member States, an increase of 9.5% on 2022 and the highest figure on record at the time of publication [1]. Deceased donors reached 45,861, of whom one in four were procured after circulatory death.

Spain led the country-level league table at 49.4 donors per million population; the United States led by absolute volume. This article summarizes the 2023 cycle and argues that the most reliable predictor of national performance is not the legal consent default but the hospital-embedded coordinator infrastructure that converts willingness into procurement. The implications for low- and middle-income reporting countries, where the binding constraints are infrastructural rather than legal, are discussed.

01 · INTRODUCTION

Introduction

Solid organ transplantation has moved over four decades from experimental therapy to standard of care for end-stage organ failure. Despite this maturation, supply meets only a fraction of estimated need: in 2023, transplant volumes covered no more than 10% of patients on national waiting lists [1].

The Global Observatory on Donation and Transplantation (GODT), maintained jointly by the World Health Organization and the Organización Nacional de Trasplantes (ONT), is the principal international registry of donation and transplantation activity. The Council of Europe’s Newsletter Transplant, published annually by the EDQM, provides an overlapping data source [2]. National activity is reported by NHSBT in the United Kingdom [3], OPTN/SRTR in the United States [4], IRODaT internationally [5], ONT in Spain [6], and equivalent national bodies elsewhere [7–11].

This article summarizes the 2023 cycle and argues that the most reliable predictor of high national performance is the hospital-embedded coordinator infrastructure that converts willingness into procurement — not the legal consent default. The argument is developed against the 2023 data and recent trial-based work on opt-out defaults [20].

02 · GLOBAL ACTIVITY

Global activity

Total transplant activity in 2023 reached 172,397 procedures across 93 Member States, an increase of 9.5% on 2022 and the highest figure on record at the time of the report [1]. The organ distribution is summarized in Figure 1.

Transplant volumes by organ - 2023

Worldwide total: 172,397 transplants. Bars ordered by volume.

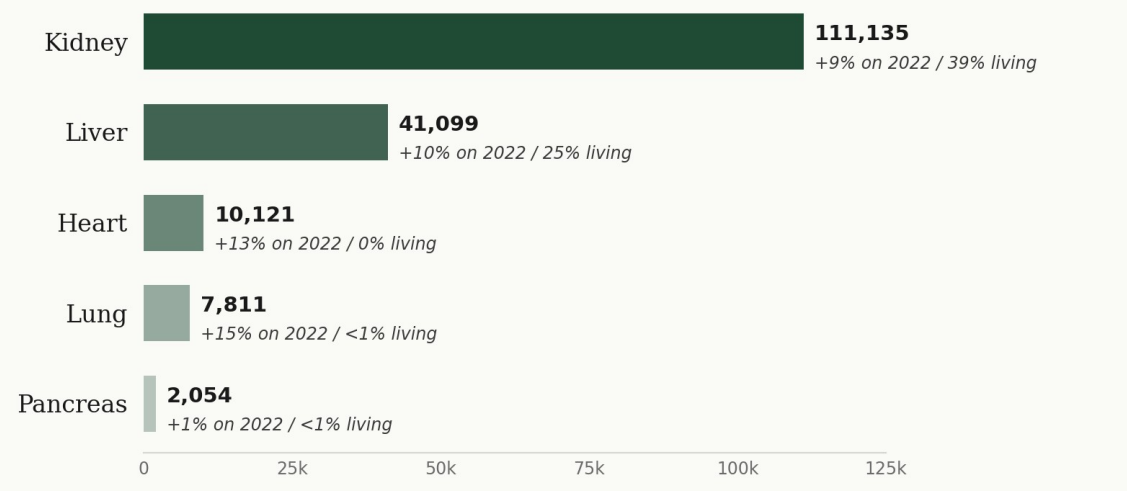


Figure 1. Worldwide transplant volumes by organ, 2023; total 172,397 transplants. Source: [1].

Deceased donors numbered 45,861. Donation after brain death (DBD) accounted for 34,466 (75%); donation after circulatory death (DCD) for 11,395

(25%). Of the DCD cohort, controlled DCD (Maastricht type III) accounted for approximately 93% [24]. The remainder were uncontrolled (Maastricht I and II) and the small Type V pathway — DCD after medical assistance in dying — reported by Australia, Belgium, Canada, the Netherlands, and Spain [1, 22].

Kidney transplantation remained the largest single organ category. Comprehensive global waiting-list and mortality figures for 2023 are not directly published in a single international registry. Estimates circulated at year-end (approximately 350,000 patients on the kidney waiting list, approximately 38,000 on the liver waiting list) are derived from the 2023 cycle and are superseded by later national releases [1]. Across all reporting countries, transplant volumes met no more than 10% of estimated need.

03 · NATIONAL DONOR RATES

National deceased-donor rates

Spain reported 49.4 donors per million population (pmp), 2,346 donors, retaining global leadership [6]. The United States reported 48.0 pmp (16,336 donors) and the largest absolute DCD cohort (5,895 donors) [4]. Table 1 lists selected reporting countries with their legal consent default; Figure 2 shows the full ranked distribution.

Country	Rate (pmp)	Consent default
Spain	49.4	Soft opt-out
United States	48.0	Opt-in
Portugal	36.8	Hard opt-out
Belgium	32.7	Soft opt-out
Slovenia	30.5	Hard opt-out
United Kingdom	22.3	Soft opt-out
Canada	21.3	Opt-in
Australia	19.4	Opt-in
Iran	12.6	Opt-in (deceased pathway)
Germany	11.6	Opt-in

South Korea	9.3	Opt-in
Colombia	7.4	Hard opt-out

Table 1. Selected reporting countries, deceased-donor rate 2023. Sources: [2, 4, 5, 6, 8, 30].

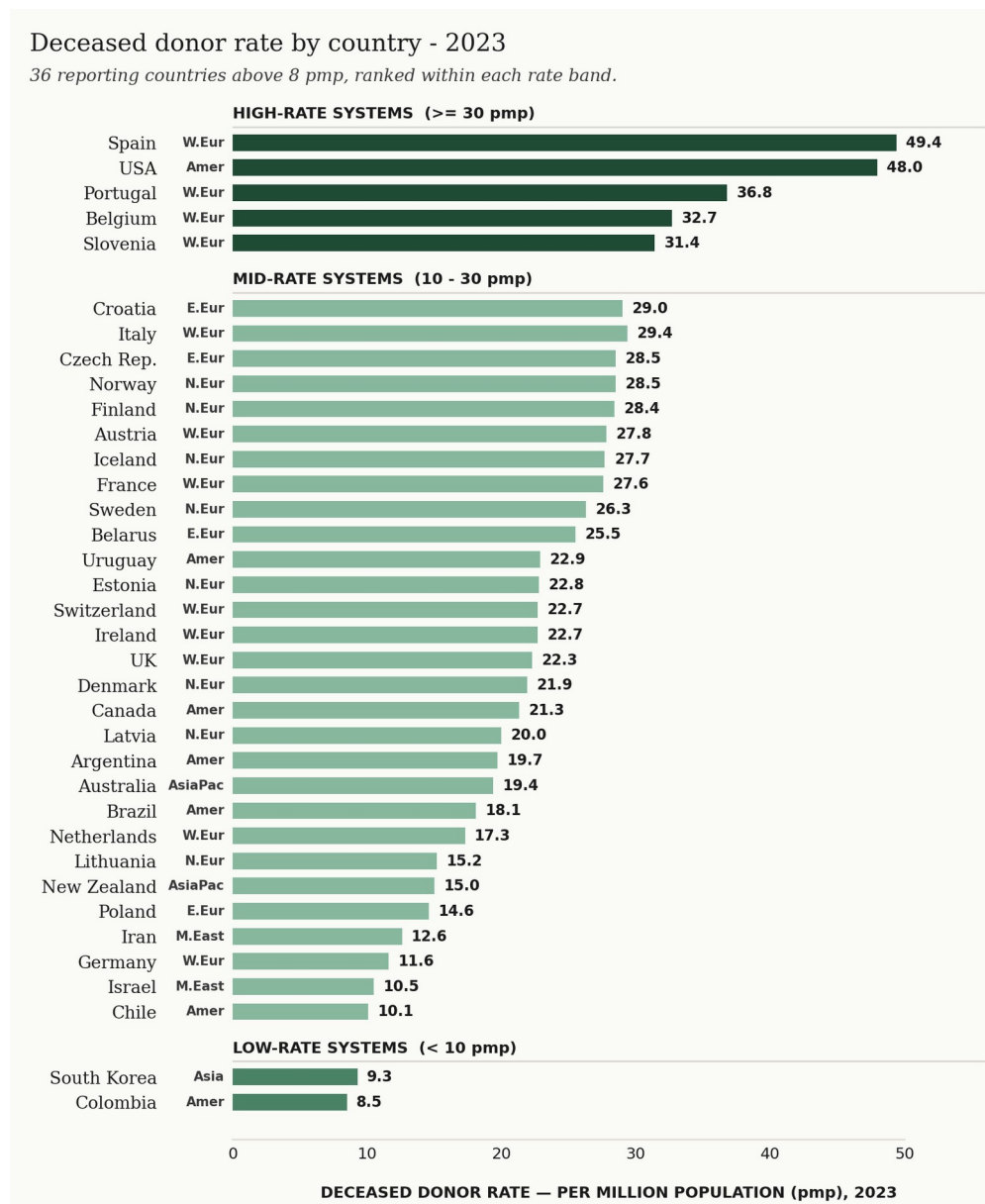


Figure 2. Deceased donor rate (pmp) by country, 2023. 36 reporting countries above 8 pmp, ranked within rate bands (high \geq 30, mid 10–30, low $<$ 10). Sources: [1, 2, 3–11].

Spain remains the only national program routinely transplanting all five solid organ types from DCD donors, including hearts, via thoracoabdominal normothermic regional perfusion [22]. Iran led the Middle East at approximately 12.6 pmp but reported through IRODaT rather than the validated

cohort [5]. African activity remained marginal — South Africa 1.3 pmp, Tunisia 0.8, Morocco 0.4 [1, 32, 33].

04 · STRUCTURAL DRIVERS

What actually moves the needle

4.1 Consent framework versus coordinator infrastructure

The legal consent framework — opt-in versus opt-out — is a weaker predictor of donation rate than the strength of hospital-embedded coordinator infrastructure and family-consent culture [13, 14, 15, 17]. Spain (49.4 pmp) and the United Kingdom (22.3 pmp) both operate under soft opt-out. The gap between them is attributable to the 1989 introduction of the ONT hospital-coordinator model, not to consent law.

England’s adoption of soft opt-out in May 2020 has not produced sustained gains. NHSBT 2023/24 reported family consent at 61% overall, down from 67–68% in the pre-pandemic period [3, 38]. Germany, at 11.6 pmp under opt-in, reports a bedside consent rate of approximately 72% when the deceased has documented their wishes [36], while only 44% of the public has documented any decision and 36% have made no decision at all [37] — its performance gap is identification and infrastructure, not culture. Recent trial-based work has reinforced this finding: opt-out defaults alone do not increase donation in laboratory or registry settings when removed from the broader coordinator system [20].

4.2 The structural rise of donation after circulatory death

DCD now accounts for nearly one in four deceased donors worldwide [1, 21]. Clinically, controlled DCD requires explicit auto-resuscitation criteria [26] and either direct procurement-perfusion or normothermic regional perfusion to mitigate warm-ischemic injury [22, 28]. Organizationally, DCD demands ICU-embedded protocols and dedicated retrieval pathways [21, 23, 25].

Ethically, the practice has been the subject of sustained policy work — particularly around the dead-donor rule and the standardization of cardio-circulatory death determination [24, 27]. The Maastricht classification [24] remains the operating standard. Country-level adoption is uneven: high-volume DCD activity is concentrated in Western Europe, North America, and Australia, with Asian programs building from a low base [29, 30, 31].

4.3 Persisting global inequity

The 2023 cycle reaffirms a strong gradient between high-income, infrastructure-rich systems and the rest of the world. Outside high-income systems, the principal constraints are infrastructural — ICU capacity, brain-death legislation, organ-procurement organization — rather than the consent default [32, 33]. The Council of Europe Guide (9th edition) [34] and the Istanbul Declaration (2018) [35] provide the standing international frameworks for safe and ethical practice.

05 · LIMITATIONS

Limitations

Three principal limitations apply. GODT figures are provisional at the time of cycle close and may be revised in the subsequent GODT release [1]. Country-level data are reported on different cycles — the United Kingdom on a fiscal year starting in April [3], most other countries on the calendar year. Family-consent and refusal rates are not consistently published across registries; comparative claims about culture-versus-default rest on the subset of countries that publish refusal data.

06 · CONCLUSION

Conclusion

The 2023 reporting cycle confirms continued global growth in transplant activity (+9.5% on 2022), Spain’s continued leadership at the country level, and a structural shift toward circulatory-death donation.

Restating the thesis: the strongest predictors of high national donation rates remain coordinator infrastructure and family-consent culture rather than the legal consent framework. Sustained gains in subsequent cycles will depend on continued investment in DCD pathway capacity, ICU coordinator training, and the closure of long-standing infrastructural gaps in low- and middle-income reporting countries.

07 · REFERENCES

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DISCLOSURE

This synthesis was prepared with the assistance of generative artificial intelligence. Source materials were limited to open-access peer-reviewed

publications, government and registry websites, and other publicly available databases. Every reference cited in this article was independently reviewed, verified against its primary source where available, and curated by the WOD Collaborative. The AI tool was used for drafting, restructuring, and consistency checking; all factual claims, attributions, and editorial decisions remain the responsibility of the WOD Collaborative.

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