Organ Transplantation in India (2020 – 2024*)

India performed more solid-organ transplants in 2023 than in any previous year, yet demand still exceeds supply by a factor of 20–25. At least 5 lakh Indians die each year while waiting for an organ they never receive.[1][2][3]

1. Annual Transplants and Donors (Calendar-year data reported by NOTTO)

Year	Total Transplants	Living-donor Transplants	Deceased-donor Transplants	Living Donors†	Deceased Donors
2020	7,443[4]	6,457[4]	984[4]	~6,457	351[4]
2021	12,259[4]	10,638[4]	1,619[4]	~10,638	552[4]
2022	16,041[5][6]	13,338[4]	2,694[4]	~13,338	904[4]
2023	18,378[7][8]	15,435[7]	2,935[7]	15,436[7]	1,099[7]
2024*	**>19,000** (provisional, Jan–May) [9]	n/a	n/a	n/a	n/a

†Living donors roughly equal living-donor transplants because kidney and partial-liver grafts are usually one-donor–one-recipient procedures.

2. Organ-wise Activity (2020–2023)

Organ	2020	2021	2022	2023
Kidney – Living	4,970[10]	8,254[10]	9,834[5]	11,791[7]
Kidney – Deceased	532[10]	818[10]	1,589[5]	1,635[7]
Liver – Living	1,487‡[7]	2,363‡[7]	2,957[5]	3,643[7]
Liver – Deceased	291[10]	482[4]	761[5]	840[7]
Heart (all donors)	67[4]	133[4]	197[4]	221[7]
Lung (all donors)	14[4]	19[4]	26[4]	197[7]

‡2020–2021 living-liver figures taken from NOTTO graphs; small discrepancies possible owing to rounding.

3. The Unmet Need

Organ	Annual Clinical Need	Current Annual Supply	Gap (Supply ÷ Need)	Key Evidence
Kidney	~2 – 2.2 lakh[11]	~13,400 (2023)	6%	NITI/NOTTO RTI data [10][3]
Liver	~30,000[3]	~4,500 (2023)	15%	MOHAN Foundation[3]
Heart	~50,000/yr need[12][13]	221 (2023)	0.4%	IANS/NOTTO[12]
Lung	"Hundreds" wait; ≈100–120 done/yr[14]	197 (2023)	<1%	Medanta & INSHLT reviews[14][15]

4. Mortality Attributable to Organ Shortage

- At least **500,000 Indians die every year** solely because an organ is not available[1][2][3].
- Kidney: ~175,000 patients remain on dialysis wait-lists; 35–40% die within five years[16].
- Liver: about **2 lakh deaths** annually are attributed to end-stage liver disease without transplantation[2][11].
- Heart: fewer than 0.2% of the **50,000** patients who need a heart each year actually receive one[12].
- Overall, **17 deaths every day** are linked to the donor shortage[2].

5. Why the Gap Persists

1. **Donation rate < 1 donor per million population** (DPM) versus 35–50 DPM in Spain/USA[17][8].
2. Limited deceased-donor infrastructure outside a handful of high-performing states (Telangana, Tamil Nadu, Maharashtra)[7][4].
3. Fragmented waiting lists (about **5 lakh people** nationally)[18][6], now being integrated under "One Nation One Policy."
4. Financial barriers: 85% of transplants are self-funded; insurance seldom covers long-term immunosuppression[19][3].

6. Motivation for an "Organ-Transplantation Management System" (OTMS)

Data-driven arguments for the project

- **Lives at stake:** >5 lakh preventable deaths per year translate to **1,370 deaths every day**, or nearly **one Indian life lost every minute** to organ scarcity[1][2][3].
- **Escalating demand:** Kidney-wait-list growth from 1.5 lakh (2019) to **1.75 lakh (2024)**, with median wait of 3–5 years[16].

- **System strain:** Despite a 147% rise in transplants between 2020 and 2023, only **8%** of aggregate need was met in 2023 (18,378 vs. >2.3 lakh organs required)[7][11].
- **Gender inequity:** 63% of living donors are women, yet **70% of recipients are men** — a disparity OTMS can flag and help correct[8].
- **Data gaps:** States fail to upload complete data; OTMS will enforce real-time reporting and transparent allocation[6].
- **Efficiency gains:** Each deceased donor yields 2.67 organs on average[4]; if OTMS doubled deceased donations from 1,099 to 2,200, **>2,900 additional lives** could be saved annually.

Therefore, the OTMS project aims to integrate wait-lists, donor registries, logistics, and outcome tracking on a single national dashboard, ensuring that no viable organ is wasted and no eligible patient is overlooked.

2024–2025 Outlook

NOTTO's mid-2024 bulletin shows India on course to pass **19,000** transplants in 2024, propelled by streamlined e-pledge registry (Aadhaar-linked) and "Angdaan Jan Jagrukta Abhiyaan."[9] Full-year data will confirm whether policy reforms translate into sustained increases in deceased donation and reductions in wait-list mortality.

(All figures are the latest published by NOTTO or peer-reviewed studies as of 18 July 2025. 2024 numbers are provisional.)

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