WHO activities for advancing the access to transplantation of human organs, tissues and cells (WHA Resolution 63.22)
The life value of transplantation

The transplantation of human tissues, organs or cells is an established form of treatment that has been acknowledged as the best and very often only life-saving therapy for several serious and life-threatening congenital, inherited and acquired diseases and injuries.

- **Vital organs (kidneys, liver, lungs, hearts)** can be replaced after chronic or acute failure due to NCDs, infections or behavioral factors (i.e. alcoholism, obesity).

- **Tissues (skin, bone and tendons, birth tissue, cardiac valves, eye tissue)** provide better survival rates following severe burn trauma, recovery of movement, closure of chronic wounds, rehabilitation of heart function and restoration of sight. Corneal disease (scarring or perforation) can be successfully addressed through transplantation in 80% of affected individuals.

- **Haematopoietic Progenitor Cells (stem cells, bone marrow)** are used in treatment of haematological conditions (cancers such as leukemia, non-malignant disorders and genetic diseases such as haemoglobinopathies, sickle cell anemia).
Increasing Conditions Relevant to Transplantation

**Transplantation**

- Intervention
  - End-stage organ failure
    - Viral hepatitis
    - NASH
    - CVD
    - Diabetic nephropathy
    - PCKD
    - Liver cancer
    - Alcoholic liver disease
    - Chronic glomerulonephritis

- Replacement - tissue and cells
  - Trauma
  - Burns
  - Blindness
  - Ageing
  - Cancer

**Other**

WHO, IARC, IAEA planning tool

08/04/2022 | Mission Briefing - Transplantation
Global activity in organ transplantation
Estimations 2020

<table>
<thead>
<tr>
<th>Kidney</th>
<th>Liver</th>
<th>Heart</th>
<th>Lung</th>
<th>Pancreas</th>
<th>S. bowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,926</td>
<td>32,586</td>
<td>8,101</td>
<td>5,940</td>
<td>1,970</td>
<td>158</td>
</tr>
</tbody>
</table>

-17.6% in 2020

≈ 129,681 solid organ transplants
≈ 17.6% decrease vs 2019
≤ 10% of global needs
31.7% living kidney transplants
20.4% living liver transplants

36,125 deceased donors (27,946 DBD and 8,179 DCD donors)
Kidney disease: The case for action

850 million people worldwide are now estimated to have some form of kidney disease.

11
disease (CKD) causes an estimated 1.2 million deaths per year and is now the 6th fastest growing cause of death. An additional 1.2 million deaths are attributable to reduced kidney function (measured by the glomerular filtration rate (GFR)).

13 million people affected worldwide. Acute kidney injury (AKI), an important driver of CKD, affects over 13 million people worldwide and 90% of these cases are found in low and middle-income countries (LMICs).

2.6 million people receive dialysis or transplantation worldwide. In 2010, 2.6 million people with end-stage kidney disease (ESKD) or “kidney failure” received dialysis or transplantation worldwide, a number projected to increase to 5.4 million by 2030.

$35,000 - $100,000 dialysis and kidney transplantation annual costs. The cost of treating CKD and its complications is unaffordable for governments and individuals in many parts of the world. Annual costs of dialysis and kidney transplantation alone range between US $20,000 and US $100,000 per patient.

Number of patients receiving RRT, millions

INTERNATIONAL SOCIETY OF NEPHROLOGY Report: 2018 UN high-level meeting on NCDs

Liyanage et al., Lancet 2015; 385:1975-82
Current Capacity

Percentage of countries with procedures for treating NCDs reported as being “generally available” in the publicly funded health system, by WHO region and World Bank income group

<table>
<thead>
<tr>
<th>Setting</th>
<th>Intervention</th>
<th>2015</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIC</td>
<td>Dialysis</td>
<td>27%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Kidney transplant’n</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>LMIC</td>
<td>Dialysis</td>
<td>40%</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>Kidney transplant’n</td>
<td>18%</td>
<td>13%</td>
</tr>
<tr>
<td>UMIC</td>
<td>Dialysis</td>
<td>58%</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Kidney transplant’n</td>
<td>36%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Slower progress!
Deceased donation activity has been reported only in 75 countries (38% of Member States)
Challenges in Transplantation

- Lack of understanding the burden of disease in order to escalate interventions for preventing end-stage organ failure.
- Limited community awareness, cultural resistance and knowledge regarding donation and the value of transplantation
- Low awareness and engagement amongst the public and healthcare professionals.
- Low organizational and political commitments reflecting in the lack of national strategies for transplantation. This includes deficient Universal Health Coverage (excluding transplantation), low level of activity specific funding (e.g. transplantation, tissue and cell banking, innovation), human resources or infrastructure.
- Inadequate legislation, ethical frameworks, regulatory oversight and governance that may allow for ethnically undesirable and inefficient practices, such as coercion of and exploitation of living donors, ‘transplant tourism’ (e.g. organs) and commercialization (e.g. tissue and cell transplants)
- Deficiencies in deceased donor identification and donation management. Impaired access to living donation programs (e.g. kidneys)
- Limited alternatives in undersupply or emergency preparedness (e.g. mass casualties -burns, trauma)
WHA Resolutions on Transplantation

- WHA 42.5 (1989) Preventing the purchase and sale of human organs
- WHA 44.25 (1991) Human organ transplantation (WHO Guiding Principles)
- WHA 57.18 (2004) Human organ and tissue transplantation (Allogeneic and Xenogeneic)
- WHA 63.22 (2010) Human cell, tissue and organ transplantation (updated WHO Guiding Principles)

- promote altruistic voluntary non-remunerated donation;
- oppose the seeking of financial gain or comparable advantage
- promote a system of transparent, equitable allocation and equitable access to transplantation services (in accordance with national capacities);
- improve the safety and efficacy
- strengthen national and multinational authorities and/or capacities
- maximize donation from deceased donors
- protect the health and welfare of living donors;
- activity data collection including adverse events and reactions
- encourage the implementation of globally consistent coding systems towards improved traceability
Recent WHO organization-wide activities for improving availability of and access to transplantation

57th DIRECTING COUNCIL
71st SESSION OF THE REGIONAL COMMITTEE OF WHO FOR THE AMERICAS
Washington, D.C., USA, 30 September–4 October 2019

RESOLUTION
CD57.R11
Original: Spanish

AFR/RC70/12
30 June 2020

REGIONAL COMMITTEE FOR AFRICA

AFR/R/70/12

REPORT OF THE SECRETARIAT

STATUS OF HUMAN ORGAN AND TISSUE DONATION AND TRANSPLANTATION IN THE WHO AFRICAN REGION

Resolution adopted by the General Assembly on 16 December 2020
[on the report of the Third Committee (A/75/478, paras. 20)]

75/195. Strengthening and promoting effective measures and international cooperation on organ donation and transplantation to prevent and combat trafficking in persons for the purpose of organ removal and trafficking in human organs.
The implementation rate of WHA Resolution 63.22 is slow and great disparity remains between Regions and Member States in regards to the availability of and access to transplantation.

Some advances have been made – however mostly in UMIC and HIC with a significant impact on donation and transplantation rates.

There are remaining, and important challenges and gaps in the field between organ, tissue and cell donation and transplantation.

The WHO sees a role in the establishment and implementation of organ, tissue and cell specific Work Frameworks, where the needs, capabilities and priorities of interested Member States can be considered.
Development of Workplan for Transplantation (WPT) of Tissues, Organs and Cells in biennial cycles 2022-2030

**Phase 1**
- HQ + Regional Offices
- Expert Advisory Groups

**Phase 2**
- Outline completed. To be published 2nd Q 2022
- In development, to be concluded by End of 2022

**Phase 3**
- To be developed next biennium (2024-2025)

**Regional Consultations**
Towards implementation, reflecting local needs, capacity and assigned priorities by interested Member States
Variety of actions – WHO output

- Guidelines and best principle in clinical and tissue/cell banking practices
- Publications / knowledge and information material (reports, fact sheets)
- Tools (registries, web platforms, IT applications)
- Technical support / capacity building (infrastructure, equipment, training)
- Research / innovation (exchange of new technologies, science developments)
- Consultation / expert meetings
The proposed WHO activities under the new workplan will facilitate the advancement of the implementation of WHA Resolution 63.22, taking in consideration the existing Regional Strategies-Plans and in alignment with the WHO 13th General Programme of Work (2019-2023). It is therefore expected to contribute to the following key outcomes:

- Increased priority given to human organ, tissue and cell transplantation within global, regional and national health agendas through advocacy and internationally agreed development goals;
- Established national leadership, governance and oversight through multisectoral action and partnerships;
- Strengthened international cooperation (exchange of best practices, provision of technical expertise, financial support and equipment) in support of low-resource countries, in particular, to enable progress towards self-sufficiency in transplantation.
Thank you for your attention

You may send us an email at: transplantation@who.int for further information