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

Report of the Secretariat

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BACKGROUND

1. Organ and tissue donation and transplantation is a medical procedure in which an organ is removed from one body and placed in the body of a recipient, to replace a damaged or missing organ or tissue. Transplantation involves organs and tissues such as the kidneys, liver, lungs, pancreas, heart, small bowel, stem cells, bone marrow, cornea, skin and reproductive tissues (eggs, ovary, sperm, testicles, uterus). Organ transplantation is one of the highest value treatments in medicine as it is often the only life-saving option for patients with end-stage organ failure. It improves the quality of life by restoring organ function and eliminates debilitating symptoms of chronic organ failure such as poor mobility, depression or infertility. It is also a significant cost-saving intervention both for patients and health care systems and facilitates social reintegration as it enhances mobility, as well as employment and education possibilities.

2. Globally, 139,024 organ and tissue transplants were carried out in 2017 which represents only 10% of the need for transplants. Kidney and liver transplants were the most frequent procedures (65% and 23% respectively). The true scale of the unmet need for organ transplantation is unknown in the African Region. Nonetheless, in 2016, a total number of 643 organ transplants were performed, which was lower than in the other WHO regions. The numbers were: 52,334 in the Americas; 28,980 in the Eastern Mediterranean; 21,620 in Europe; 8,477 in South-East Asia; and 21,957 in the Western Pacific. There is no information about reproductive tissue transplantation as a method of treating infertility in the African Region.

3. Several resolutions have been endorsed by the World Health Assembly (WHA) and the United Nations General Assembly (UNGA), including resolutions WHA63.22 and A/RES/71/322 to articulate the urgent need to improve the availability, quality and safety of organ and tissue donation and transplantation, as well as to prevent and combat trafficking in human organs. This paper highlights the status of implementation of the above-mentioned resolutions pertaining to organ and tissue donation and transplantation (OTDT), identifies obstacles and challenges and proposes priority actions to be taken by Member States and partners in the WHO African Region.

ISSUES AND CHALLENGES

4. Lack of legal and regulatory frameworks in most Member States: A survey conducted from September 2016 to December 2018 showed that only a limited number of Member States in the African Region had some legal requirements in place covering OTDT from living donors. These included written consent and ethics committee approval in 11 Member States, prohibition of organ trafficking and commercialization in nine Member States, and organ import and export in three

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7. Algeria, Burkina Faso, Comoros, Côte d’Ivoire, Mali, Namibia, Nigeria, Rwanda, Senegal.
Member States (Algeria, Burkina Faso and Seychelles). Furthermore, there are no legal requirements in place for recipients and deceased donors, only for living donors. However, Kenya has already drafted new legislation which covers the donation of organs and tissues from both living and deceased donors, and eight Member States\(^8\) intend to adopt new legal requirements. Nonetheless, the weak regulatory frameworks are often unable to ensure the effective oversight needed for the implementation of quality and safety standards for organ transplantation.

5. **Insufficient national capacity to carry out organ and tissue transplantation:** From the results of the survey, seven Member States\(^9\) in the African Region reported having functional transplantation programmes in place, meaning that they have capacity to perform kidney transplants and post-transplant management of recipients within the country’s borders. There are a total of 35 kidney transplant centres taking donations from living donors in the African Region. Namibia and Uganda reported one heart transplant centre each. Algeria has 12 cornea transplant centres while Kenya has five. Algeria reported having three transplant centres for liver and five for bone marrow. Four Member States\(^10\) performed approximately 350 kidney transplants from living donors according to the survey conducted. Due to limited national capacity for kidney transplant programmes, some countries have put in place haemodialysis centres while starting such programmes.

6. The small number of Member States having functional transplantation programmes is due to lack of consolidated national programmes. Indeed, these programmes are generally under-resourced, with inadequate infrastructure, insufficient institutional support, lack of technical expertise including competent human resources in transplantation areas of work and technology. In addition, the majority of transplant and hemodialysis centres, where they exist, are usually located in capital cities resulting in limited access to treatment. Furthermore, the lack of public awareness in most Member States is also critical, especially in those with many religious, cultural, and social traditions, which can create barriers to accessing OTDT services.

7. **Weak organization and management of national OTDT programmes:** Most Member States have not yet established functional coordination mechanisms for OTDT programmes. These mechanisms are: authorization for transplant services, ethics committees at the national level, government-recognized authority at the national level, setting up protocols, guidelines, recommendations, transplant follow-up for post-transplant living donors and recipients, etc. In addition, this activity is not yet sufficiently integrated into national health development programmes, and collaboration between Member States is limited.

8. The survey conducted in the African Region indicated that seven Member States\(^11\) had established authorities at national level responsible for overseeing transplant activities. Kenya has created a department integrating the management of blood, tissues and organs at national level. Since the demand exceeds the supply, six Member States\(^12\) have established a cooperation framework or agreement with partners to allow patients to have transplants abroad. There is insufficient multisectoral OTDT response. Consequently, OTDT in Member States remains largely a health sector issue with little involvement of other development sectors. In addition, there is an absence of strategic guidance at the regional level.

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\(^8\) Cameroon, Chad, Eswatini, Ghana, Guinea, Madagascar, Mali, Mozambique.

\(^9\) Algeria, Côte d’Ivoire, Ethiopia, Kenya, Namibia, Nigeria, Uganda.

\(^10\) Côte d’Ivoire, Ethiopia, Kenya, Nigeria.

\(^11\) Algeria, Côte d’Ivoire, Ethiopia, Ghana, Mali, Senegal, Uganda.

\(^12\) Algeria, Côte d’Ivoire, Ethiopia, Kenya, Namibia, Uganda.
9. **Limited OTDT data:** According to the first regional survey for which 33 Member States\(^{13}\) provided responses, the following main obstacle and challenge to the establishment of transplantation programmes in the African Region was identified. Most Member States did not include in their national health information systems performance indicators such as estimated potential number of donors, percentage of organs offered and accepted, number of organ transplants, number of living donors, and number of organ transplant recipients. Consequently, these Member States did not conduct surveys to collect data on OTDT, leading to unavailability of accurate, reliable and timely information in the Region.

10. **Insufficient funding for OTDT from domestic and external sources and inadequate financial protection:** The results of the survey showed that six Member States\(^{14}\) indicated that financial resources for organ donations and transplants came from public sources. For 14 Member States,\(^{15}\) recipients were responsible for paying for post-transplant care and drugs including those performed outside these countries, while in eight Member States,\(^{16}\) living donors had to pay for follow-up care. It was only in Algeria, where all transplant recipients had access to immunosuppressive agents free of charge and these medicines were available. The high cost of organ transplants and immunosuppression therapies, coupled with inadequate financial coverage and protection in most Member States, constitute barriers to equitable access to these medical procedures.

**ACTIONS PROPOSED**

11. **Member States should:**

(a) develop and implement policies, strategies, plans and regulatory frameworks for all aspects of OTDT, including strengthening the capacity of national regulatory authorities, and combating trafficking and transplant tourism in line with resolutions pertaining to human cell, tissue and organ transplantation;

(b) integrate OTDT and strengthen linkages with complementary health programmes, such as noncommunicable and communicable diseases (NCDs and CDs) and blood transfusion services (BTS), to scale up prevention, early detection, diagnosis and treatment of diseases leading to end-stage organ failure;

(c) develop human resource competencies in transplantation specialties and skills and adopt technical and scientific criteria and quality management procedures in all aspects of OTDT, where such programmes exist;

(d) increase access to OTDT services in health systems through early detection of potential recipients and their timely referral;

(e) establish hemodialysis programmes where there is no kidney transplant programme, in order to start such a programme;

(f) promote organ and tissue donation in the community through continued public education and public awareness to increase their availability and ensure timely access, especially in Member States where there are many misconceptions;

\(^{13}\) Algeria, Angola, Benin, Burkina Faso, Burundi, Cabo Verde, Cameroon, Chad, Comoros, Congo, Côte d’Ivoire, Eritrea, Eswatini, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Madagascar, Mali, Mauritius, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Sudan, United Republic of Tanzania, Uganda, Zimbabwe.

\(^{14}\) Algeria, Comoros, Ethiopia, Ghana, Mali, Seychelles.

\(^{15}\) Burkina Faso, Côte d’Ivoire, Ethiopia, Gabon, Ghana, Guinea, Kenya, Madagascar, Mali, Namibia, Nigeria, Rwanda, Uganda, Zimbabwe.

\(^{16}\) Burkina Faso, Gabon, Guinea, Kenya, Madagascar, Namibia, Uganda, Zimbabwe.
(g) sensitize and engage other development sectors in addressing OTDT issues;
(h) invest in strengthening health information systems and build capacity in collecting data on OTDT;
(i) conduct regular surveys to track progress in achieving global OTDT targets;
(j) establish national coordination mechanisms for OTDT, building on the experience of other health programme coordination structures to ensure the participation of key stakeholders, including civil society, the private sector and training institutions;
(k) leverage existing funding to fight NCDs and CDs and their progression to end-stage organ failure;
(l) mobilize adequate resources for OTDT through increasing of domestic budgetary allocations and contributions from external donors, and exploring innovative financing mechanisms including health insurance and public-private partnerships.

12. **WHO and partners should:**

(a) develop a regional strategy, plan of action and regulatory framework for all aspects of OTDT and the fight against trafficking and transplant tourism, in line with resolutions pertaining to human cell, tissue and organ transplantation;
(b) support Member States to develop and implement their national OTDT policies, strategies, plans of action and regulatory frameworks;
(c) conduct a large-scale ethnographic study to address socioeconomic beliefs pertaining to OTDT;
(d) provide support to Member States to strengthen their OTDT capacity in terms of technical expertise, infrastructure and equipment;
(e) facilitate South-South cooperation as well as identify and promote subregional centres of excellence so that countries with experience and expertise in OTDT can support those with less advanced programmes;
(f) support Member States in developing or strengthening resilient health systems to integrate OTDT programmes;
(g) develop and implement a Region-wide OTDT leadership capacity building programme to enhance knowledge and upskill country teams in planning and implementing OTDT interventions;
(h) provide information on key partners available and willing to support Member States in implementing OTDT programmes; and
(i) provide technical and financial support to Member States to scale up implementation of OTDT and to strengthen national health systems to move towards universal health coverage.

13. The Regional Committee examined the document and endorsed the actions proposed.