



# Worldwide Network for Blood and Marrow Transplantation

## **WBMT Current Status with the WHO**

The WBMT has a collaborative relationship and is in official relations with the WHO. Since acquiring *NGO in official relations* status, the WBMT provides a set of deliverables to the WHO in pursuit of its educational, scientific, and philanthropic mission (**See below**). Because of the importance of this collaboration, the WBMT created in 2016 a Board position, generally the past-President, specifically designated to represent the WBMT to the WHO.

## **WHO WBMT Collaborative Projects**

Those activities which form the foundation of WBMT's continued work are:

- Work with the Global Observatory on Donation and Transplantation.
- Promote access to HCT – stem cell donation.
- Develop a donation guidance document.
- Promote access to HCT – stem cell transplantation.
- Provide technical and scientific input on safety and quality of HCT.
- Provide global consultation on ethics, safety, and access to HCT.
- Contribute to the initiative for global vigilance and surveillance of adverse reactions and events.
- Provide consultation services.

## **Collaborative Projects (previous and ongoing)**

The WBMT works in collaboration with the WHO as an NGO and WBMT is engaged in the following projects:

### **NOTIFY Project**

WBMT members have participated in the NOTIFY Project since a first meeting in Bologna in 2011. The NOTIFY Project, a vigilance initiative, was launched as a joint venture by WHO and the Italian National Transplant Center. Also, in collaboration with the European SOHO V&S project (Vigilance and Surveillance of Substances of Human Origin), this global initiative was organized to support the vigilance and surveillance of substances of human origin (organs, tissues, and cells for transplantation and assisted reproduction). A sub- project of the broader NOTIFY Project is referred to as BIG V&S (Bologna Initiative for Global Vigilance and Surveillance), coordinated by the WHO and the Italian National Transplant Center. Adverse reactions associated with MPHO can be reported to this group.



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An important accomplishment of the NOTIFY group of experts was the development of the NOTIFY Library, a large database launched in 2013, which provides global access to reports of adverse outcomes. WBMT was in a unique position to make important recommendations to this group, including changes in cell type taxonomy data items and keywords specifically related to cellular therapies. WBMT representatives also recommended improving website navigation processes and the formation of an editorial board including more specialists in hematopoietic progenitor cell therapies. Experts in this Blood Working Group will eventually join existing editorial working groups, and, as the work develops, an Editorial Group will be established for Transfusion Reactions.

### Medical Products of Human Origin

WBMT is one of four WHO NGOs assigned to the MPH0 project. A paper produced by these four NGOs is completed and awaiting publication. The WHO circulated another draft paper, entitled “Principles of donation and management of MPH0s”, to the WBMT for comments. This paper focuses on donor concerns, including development of an overarching set of guiding principles to ensure ethical and safe practice in management of donors of MPH0 and derived products. The principles will cover the different aspects of donation and MPH0 management to the point of product allocation and should include: safety, ethics, transparency, traceability, and informed consent. It is anticipated that these principles will be a central plank for future regulation of MPH0. Publications prepared relevant to these topics include:

- [Adverse event reporting for cellular therapy products: Current status and future directions.](#) Loper K, Sugrue MW, Raval JS, Schwartz JY, Land K, Koh M, Mengling T, Greinix H, Halter JP, Celluzzi CM, Chaudhri M. *Transfusion*. 2020 Dec;60(12):2815-2827.
- [Cell, tissue and gene products with marketing authorization in 2018 worldwide.](#) Cuende N, Rasko JEJ, Koh MBC, Dominici M, Ikonomou L. *Cytotherapy*. 2018 Nov;20(11):1401-1413.
- [Science, ethics and communication remain essential for the success of cell-based therapies.](#) Dominici M, Nichols KM, Levine AD, Rasko JE, Forte M, O'Donnell L, Koh MB, Bollard CM, Weiss DJ. *Brain Circ*. 2016 Jul-Sep;2(3):146-151.

### Unproven Cellular Therapies

In 2020 a position paper entitled “Unproven Cellular Therapies” was submitted to the WHO for endorsement. The information in the paper was assembled and reviewed by over 100 experts in the field of stem cell based therapies. The aim of the paper is to educate both the public and the medical community regarding the appropriate use of cellular therapy and the importance of engaging in



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clinical trials as most of these novel cellular therapies are still investigational products. Under Mickey Koh's guidance and leadership a final version of the position paper was submitted to the WHO. Endorsement by the WHO is pending.

Mickey Koh was invited to present his work on "unproven therapies" to the WHO Expert Advisory Committee on Developing Global Standards and Oversight of Human Genome Editing. This was followed by a discussion and interactive session with the panel on how Genome editing is within the remit of Unproven Therapies and the relevant points raised by the document prepared by WBMT. This was followed by work looking at various clinical scenarios worldwide involving human genome editing including unscrupulous entrepreneurs and Unproven Stem Cell Clinics.

### **Global Observatory on Donation and Transplantation**

Data on international use of HCT procedures are gathered inconsistently across the globe but usually by registries and professional societies. The Department of Essential Health Technologies of the WHO and the Spanish National Transplant Organization (Organización Nacional de Trasplantes) established the Global Observatory on Donation and Transplantation ([transplant-observatory.org](https://transplant-observatory.org)) in 2007. These collaborative activities help to meet the requirements of the 2004 57th World Health Assembly Resolution WHA57.18. This resolution suggested the collection of global data on the practices, safety, quality, efficacy, and epidemiology of transplantations as well as their global availability for all those concerned, including professionals, patients, politicians, and the general public, are recognized as a prerequisite for global improvement of, and better access to, transplantations [Organs, Tissues and Cells, (2), 91-94, 2007]. One goal of the Observatory is the development of a global database on donation and transplantation. WBMT Member Societies, particularly the WMDA, contributed substantially by providing unrelated donor information from their own databases to this Observatory databank.

The WBMT provided its first HCT activity contribution to the Global Observatory in 2012 with Global Survey data from 2006-2008 and now updates these data as they become available. The 2014 data were provided by the WBMT in the first half of 2017 and updated and refreshed in late 2017. The summary of Global Transplant Activity is now updated by the WBMT every 2 years, most recently in 2021 with regional summaries presenting data on the Eastern Mediterranean/African and an EMRO specific summary as well.

- [One and a half million hematopoietic stem cell transplants: continuous and differential improvement in worldwide access with the use of non-identical family donors.](#) Niederwieser D, Baldomero H, Bazuaye N, Bupp C, Chaudhri N, Corbacioglu S, Elhaddad A, Frutos C, Galeano S, Hamad N, Hamidieh AA, Hashmi S, Ho A, Horowitz MM, Iida M, Jaimovich G, Karduss A, Kodera Y,



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- [Narrowing the gap for hematopoietic stem cell transplantation in the East-Mediterranean/African region: comparison with global HSCT indications and trends.](#)

Baldomero H, Aljurf M, Zaidi SZA, Hashmi SK, Ghavamzadeh A, Elhaddad A, Hamladji RM, Ahmed P, Torjemane L, Abboud M, Tbakhi A, Khabori MA, El Quessar A, Bazuaye N, Bekadja MA, Adil S, Fahmy O, Ramzi M, Ibrahim A, Alseraihy A, Ben Abdejalil N, Sarhan M, Huneini MA, Mahmal L, ElSolh H, Hussain F, Nassar A, Al-Hashmi H, Hamidieh AA, Pasquini M, Kodera Y, Kröger N, Mohty M, Jaimovich G, Rolon JM, Paulson K, Greinix H, Weisdorf D, Horowitz M, Nunez J, Gratwohl A, Passweg J, Koh M, Szer J, Niederwieser D, Novitzky N; East-Mediterranean (EMBMT) and African (AfBMT) Blood and Marrow Transplantation Groups and the Worldwide Network for Blood and Marrow Transplantation (WBMT). *Bone Marrow Transplant*. 2019 Mar;54(3):402-417. doi: 10.1038/s41409-018-0275-5. Epub 2018 Aug 6. PMID: 30082852

- [Strategic priorities for hematopoietic stem cell transplantation in the EMRO region.](#)

Ahmed SO, El Fakih R, Elhaddad A, Hamidieh AA, Altbakhi A, Chaudhry QU, Bazarbachi A, Adil S, Al-Khabori M, Ben Othman T, Gaziev J, Khalaf M, Alshammeri S, Alotaibi S, Alshahrani M, Bekadja MA, Ibrahim A, Al-Wahadneh AM, Altarshi M, Alsaeed A, Madani A, Abboud M, Abujazar H, Bakr M, Abosoudah I, El Cheikh J, Almasari A, Alfraih F, Baldomero H, Elsolh H, Niederwieser D, Chaudhri N, Aljurf M. *Hematol Oncol Stem Cell Ther*. 2021 Oct 18:S1658-3876(21)00090-X. doi: 10.1016/j.hemonc.2021.09.006. Online ahead of print. PMID: 34688625

### **Ongoing Collaboration between WHO and WBMT**

Specific collaborative projects proposed by WBMT have included both a WBMT workplan (below) and ongoing discussions to establish a Global Framework for further collaboration in Hematopoietic Cell Transplantation. The workplan has included:

#### **Defining Essential medications for transplantation:**

WHO maintains a list of essential medications for other medical uses.

Since WHO currently monitors shortages; WBMT will propose a joint plan for monitoring pricing and availability or procurement practices of transplant essential drugs. This activity may also provide regular surveys to capture information on drug (or device) shortages in various world regions.



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Establish a warning tool and communications plan for monitoring and responding to HCT related drug/device shortages. This could include a list of alternatives (e.g. biosimilars, generics, patent-free drugs etc) to be shared through WHO to regulatory authorities in various regions to ensure availability and affordability of drugs/devices.

Encourage regular discussions with political authorities and practitioners along with scientific organizations and pharmaceutical industry representatives to sustain access to essential medications and innovative therapies.

### **Cost Saving Practices**

Highlight and promote low cost practices that may be best applicable in Low/Middle Income Countries (LMIC) or across the world. Examples are: (haplo vs MUD; Use the same catheter for stem cell collection and infusion; generic plerixafor for PBSC collection efficiency).

Establish good practices through survey and interviews from LMIC BMT experts.

### **Disaster planning**

Integration with WHO in disaster management; especially in radiation or nuclear accidents where the HCT community has capability and specific expertise.

### **Communication with local and regional authorities**

Acknowledgment from WHO that guidelines and procedures having international recognition could help centers and other institutions establish and expand transplant activities. This WBMT activity is fitting with the goals of WHO, but at present is not a joint WBMT-WHO activity.

### **New aspects of the WHO-WBMT Workplan (proposed in 2021) include:**

- Provide technical input and relevant data that may inform WHO's work on raising awareness and addressing the burden of diseases/conditions that are amenable to HCT.
  - a) Report containing a review of diseases and conditions that can be treated by HCT, addressing the prevalence (burden) and regional/country perspectives and estimates on how many patients can be saved is submitted for WHO's consideration.
  - b) Report on global diffusion of HCT with specific focus on country capacities, number of transplant centres, health workforce, donor registries, and unmet needs.
- Provide technical input that may inform WHO's work towards developing guidance materials for establishing Hematopoietic Stem Cell Transplantation programmes at country-level.



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- a) Report containing best practices identified and proposals on the criteria for minimum requirements and existing standards for HCT, including costing and essential medications is submitted for WHO's consideration.
- b) Report containing a review of current donor options worldwide, ethical challenges identified for minors as donors, and existing standards for selection (related and unrelated), quality and safety, is submitted for WHO's consideration.
- Provide technical input that may inform WHO in assessing access to cell and gene therapies worldwide in line with current WHO frameworks and guidelines. Proposal - outline for a worldwide survey on current use of cell and gene therapies and future needs, including mapping of how practices are regulated, is submitted for WHO's consideration.
- Provide technical input that may inform WHO in the development of resources and tools for strengthening the oversight capacity at global and national level, in line with WHO's principles. Proposal for a tool on how to monitor practices worldwide is submitted for WHO's consideration.
- Provide technical input that may inform WHO's work on development of quality and safety guidance for gene and cell therapies, in line with the relevant WHO regulatory frameworks and guidelines. Report containing a review of current safety standards, quality management systems and accreditation processes currently available for the development of gene and cell therapies, is submitted for WHO's consideration.
- Continue the close collaboration with the WHO on global projects relevant to HCT and fulfilling WBMT responsibilities as an NGO in official relations with the WHO, including the ongoing WHO-sponsored project, the ISCT Presidential Task Force on Unproven Cellular Therapies.