

Starting new HSCT program in emerging countries in Asia-Pacific Area

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Factors for a sustainable HSCT Program

- **Staff and leadership**
- **Infrastructure**
- **Planning**
- **Finance**
- **Communication**



Establishing a sustainable HSCT program

Sufficiently trained staff & farsighted leadership

- **Physicians – Training (2-3 years) in haematology and transplantation (most critical)**
- **Nurses (critical) – motivated & well trained (like ICU)**
- **Apheresis staff & laboratory scientists**
- **Transplant coordinators & allied health staff**
- **Others :**
 - **Medical specialties - Infectious Diseases, Radiology, Pathology, ICU etc**
 - **Engineering and domestic staff**



Establishing a sustainable HSCT program

Appropriate infrastructure

Medical Infrastructure

- Blood supply including platelets / plasma/Ivlg
 - Blood irradiation facilities or effective leukocyte filter
- 24/7 laboratory services :
 - Haematology (flow cytometry/molecular & cytogenetics);
Biochemistry (drug levels)
 - Microbiology –bacterial/fungal, viral (quantification)
 - Pharmacy Services : drugs/TPN/ others
- Insertion & caring of central venous catheters (multi-lumen)
- HLA typing: in-house or outsourced



Establishing a sustainable HSCT Program

Physical & other Infrastructure

- Transplant rooms & stem cell laboratory – filtered air (surgical operating theatre)
- Water & food supply – “clean or sterile”
- Support Services – Trained domestic services, Central Sterile Supply
- Monitoring of physical environment, air & water

**Drs Baylon & Perez
Manila, Philippines**





Factors for a sustainable HSCT Program

- Staff and leadership
- Infrastructure
- **Planning**
- Finance
- Communication



Establishing a sustainable HSCT program

Planning

Meticulous planning with realistic timeline (long term project)

- Adult or paediatric or both
- Start with
 - autologous HSCT
 - or
 - HLA matched allogeneic transplants (both!)
- Careful selection of initial patients (*treatment related morbidity & death - **patient & donor**; your success depends on it*)



Establishing a sustainable HSCT program

Policies & Protocols

- For all transplant procedures (patients & donors)
- Systematic data collection for analysis & quality management
- Physical environment: including entry/exit
- Domestic and cleaning services etc



Factors for a sustainable HSCT Program

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Establishing a sustainable HSCT program

Have a 'business' model

- **Need to ensure a program that is financially sustainable within the health care system**
 - **CMC Vellore, India: a cost & pay structure to allow patients who can afford (insurance or self funded) and those with limited incomes to access the program**



Example of Establishing a sustainable

HSCT program: HSCT Centre HCM, Vietnam (based on Professor Tran Van Binh's presentation, WBMT Workshop Nov 2011)

Country Profile:

Vietnam: small country on the Indo-China peninsular

- **Population : 85 million (third most populous after Indonesia & Philippines)**
- **58.9% < 25 years of age**
- **Population density 259/km²**
- **Per capita income \$100 US/mth**
- **29.6% live in city**





Example of Establishing a sustainable HSCT program: HSCT Centre HCM, Vietnam

The Transplant Unit: 1996-2013: 152 cases performed

10 First Transplants:

- Clean room: isolated, double door, furniture decontaminated by UV and chemicals, water filtrated
- Patient preparation: hair cut, antiseptic baths, well cooked food.
- Physicians & all staff wash hands

From 2005: Positive pressure ventilation HEPA

- 6 well trained nurses permanently care for patient
- 6 trained physicians for adults, 2 for paediatric patients
- Supported by all other departments of the hospital



Example of Establishing a sustainable HSCT program: HSCT Centre HCM, Vietnam

Cost of the procedure

>90% of the population cannot afford it: efforts to reduce the cost of the transplant

- Covered partially by National Medical insurance**
- Medications & consumable materials: imported**
- Allo BMT: USD. \$15,000 without complications; serious complications \$45 -50,000 (one of the lowest in Asia-Pacific)**



Factors for a sustainable HSCT Program

- Staff and leadership
- Infrastructure
- Planning
- Finance
- Communication



Effective Communication: Target audience

- 1. Patients and relatives**
- 2. Staff and colleagues**
- 3. Health authority, government and international agencies**
- 4. Public including volunteer adult donors and cord blood donors**

Aim: the value and benefit of BMT

The approach depends on the target audience



Establishing a sustainable HSCT program:

Effective Communication

- Develop a team that communicates well with patients and families, colleagues and administrators (*patients are your best advocates*)
- Harmonious team atmosphere: allow open discussions & questions
- Keep up-to-date with recent advances – regular seminar, conference attendance (look outside the square)
- Encourage & introduce research into clinical practice

Establishing a successful HSCT program depends on adequate financial support - government, community or other Support



Health authorities, Government policy makers, International Agencies

- **Appreciate their responsibilities in healthcare & other matters**
- **Understand cost-benefit**
 - assessing disease burden such as Disability Adjusted Life Years (DALY) & Quality Adjusted Life Years (QALY)
 - Demonstrate value of BMT in economic term and in their terms (popularity)
- **Get them on side : communicate effectively, public supports (advocacy groups)**
- **Collect activity & outcome data and participate in Registries (to provide evidence)**



Justification of HSC Transplant in an emerging country

- **WHO charters: human rights and equality issues.**
- **Lack of cure → loss of lives**
- **Lack of QOL years; loss of manpower →
↓economic growth**
- **High cost (financial & social) of alternative options
e.g. Thal major, Sickle Cell, CML**



Justification of HSC Transplant program in an emerging country

- **“Rich” ones go abroad for HSCT. If transplant is done in the country, resources will remain locally**
- **Expertise developed will benefit other services**
- **Better for the patient & their families**



Harnessing the power of the public & media

- **Advocacy groups**

- Counselling, education programme, peer & family supports
- Dealing with government and other authorities
- Funding raising and awareness campaigns
- Use of celebrities e.g. South Korean actresses (volunteer donors), sport heroes





Example of planning a sustainable HSCT program:

SETTING UP OF A STEM CELL TRANSPLANTATION PROGRAMME IN NATIONAL CANCER INSTITUTE, SRI LANKA

IN COLLABORATION WITH

Department of Haematology and BM Transplantation, ST VINCENTS HOSPITAL, SYDNEY



Establishing a HSCT Program- summary

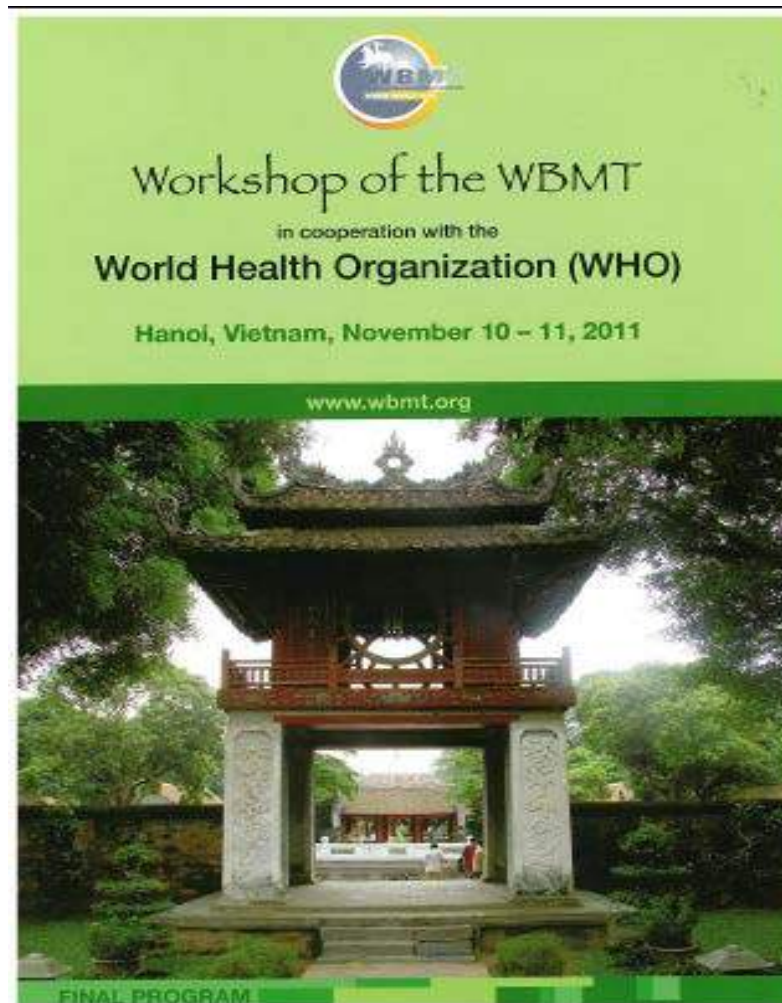
Aim: benefit patient – high risk procedure

***Good Planning
& appropriately trained Team
With adequate supports***

**Sustainability depends on outcomes – a key to
success!**



Role of WBMT (WHO) & APBMT



**The Bell of Bankoku
Shinryo:**

Bringing the gap

We are here to help each other

Thank You

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