

# NURSING TRAINING ENABLES A HEMATOPOIETIC STEM CELL TRANSPLANTATION STARTUP IN DODOMA, TANZANIA

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## **Type selection**

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## **General data**

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## **Title**

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## **Abstract text**

**Background:** Sickle Cell Disease (SCD) is an inherited hemoglobinopathy which is estimated will be diagnosed in 14 million children worldwide between 2010 and 2050 and of these, 84% from the African continent. In Sub-Saharan Africa, SCD has a mortality rate range of 50%-90% in children under the age of 5 years. The only curative option is bone marrow transplantation from a healthy donor, but access to this treatment in low income countries has been limited.

**Methods:** With around 11,000 new diagnoses each year in a population of 62 million people, Tanzania launched a development programme in 2018 to establish the first Hematopoietic Stem Cell Transplant Centre at Benjamin Mkapa Hospital in Dodoma (BMH). Previous experience of implementing transplant programmes in developing countries suggests the importance of investing in nursing education, since unlike physicians who may be supported in clinical decision making through specialist consultation, nurses must independently manage the practical aspects of patient care. To that end, and with the contribution of the Association HELP3 (<https://help3.it/>), 4 nurses from BMH took part in a training programme at San Raffaele Hospital in Milan and San Gerardo Hospital in Monza. Between November and December 2022, 2 nurses undertook a month-long observational internship at the Haematology and Bone Marrow Transplantation Unit at San Raffaele Hospital. Each nurse was personally tutored by a colleague with expertise in bone marrow transplantation. The main training objectives were drug therapy management, the management of central venous access, infection prevention measures and patient/caregiver education. Of particular importance at this stage was the exchange of views in order to understand whether the model of care observed would be reproducible in Tanzania based on available resources and the sociocultural context of the population.

**Results:** Between January and March 2023 at BMH, the first 3 successful matched sibling donor hematopoietic marrow transplants in Tanzania's history were performed. An Italian team of 6 haematologists and 5 nurses participated onsite. The purpose of the nursing team's intervention was to guide their Tanzanian colleagues using specialised methodology, ensuring maximum safety in patient management. Work focussed particularly on ward set-up, drug/prescription control and supply, therapy management and vascular access care. With onsite presence, it was possible to verify that all infection measures were implemented effectively and that the educational intervention was applicable to the context. The BMH nurses achieved the autonomy needed for patient care, maintaining telephone contact with their Italian colleagues when needed. Two further patients with SCD underwent transplant in 2023 without the presence of the Italian team.

**Conclusions:** The results obtained need consolidation through the continuation of this training programme. The experience gained in the field by the Tanzanian team is an example of good clinical practice and proof that even in a complicated context such as Sub-Saharan Africa, bone marrow transplant, now a standardised curative treatment for many blood disorders, is possible.

## **Conflict of Interest statement**

**Disclosure:** Nothing to declare

## **General**

- 1. I confirm that the abstract and that all information is correct:** Yes
- 2. I confirm that submission of the abstract constitutes consent to publication:** Yes
- 3. I confirm that I submit this abstract on behalf of all authors.:** Yes
- 4. I confirm that all contributors have provided original material:** Yes
- 5. I understand that the Annual Meeting and the publisher reserve the right to decline publication for any reason:** Yes
- 6. Has this abstract been previously published online or in other media (journals, other meetings)?:** No