



SDI Review Form 1.5

PART A:

Journal Name:	International Journal of TROPICAL DISEASE & Health
Manuscript Number:	MS: 2012/IJTDH/1793
Title of the Manuscript:	TRANSFER OF TECHNOLOGY FOR BONE MARROW TRANSPLANTATION TO CURE SICKLE CELL DISEASE USING THE DIFFUSION OF INNOVATION THEORETICAL MODEL.

(Note: Title of different sections as proposed below may differ in case of review paper)



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PART B: Review Comments

	Reviewer's comment		Author's comment (if agreed with reviewer, correct the manuscript and highlight that part and write here 'Corrected'/ if not agreed, give suitable justifications)
General comment:	In this manuscript the author suggest the use of the diffusion of innovations model to disseminate bone marrow transplantation technology for the cure of sickle cell anemia and other hemoglobinopathies. The author also discussed the necessity of the construction of the "Clean Room" and how the medical team must protect their patients from acquired infections, nosocomial and iatrogenic diseases during transplant period. Globalization and rapid human migration have increased the frequency of sickle cell anemia and other hemoglobinopathies. Unfortunately, there are the developing countries which have low medical infrastructures and low resources. In this manuscript the author described: 1) use of the diffusion of innovations model to disseminate bone marrow transplantation; 2) Identify technologically developed nations having the relevant medical workforce and technological infrastructure for BMT; 3) Accentuate the relevance of equipping transplant facilities with the construction of the CLEAN ROOM with the state of the science resources to protect SCD patients from graft versus host disease; 4) Discuss the importance of reducing or practically eliminating of hospital acquired infections(HAI); 5) Discuss capacity building, and scientific workforce development 6) Explore the ethical, legal, social, and financial implications of adopting Bone Marrow Transplantation medical innovations to cure sickle cell anemia.		I have corrected the use of the clean room exclusively to prevent nosocomial and iatrogenic diseases in patients
Specific comments:	1)In "Bone ,arrow transplantation Technology" it isn't easy comprehend the difference between allogeneic or, mach related and unrelated transplant and haploidentical transplant. Patients without matched family or unrelated donors could benefit from haploidentical mother-to child		I have also clarified the various types of transplant procedure based on the observations of this reviewer. I have also acknowledged



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	transplantation, which has shown encouraging results, although it is still in the experimental phase. 2) Cyclosporine is used to suppress the immune system, preventing GVHD post transplant and Alentuzumab and Sirolimus are used for specific transplant. When the allogeneic graft starts to proliferate in the recipient, an immunological graftversus-host reaction (graft-versus-host disease [GVHD]) may occur. GVHD can affect one or more organs to varying degrees, with the most frequently affected being the skin, gastrointestinal tract, and liver. GVHD is a serious complication of bone marrow transplantation and can be fatal; therefore, the prophylactic administration of cyclosporine (an immunosuppressive drug) is an important part of the pretransplant and posttransplant treatment. Three or four doses of methotrexate may also be given in addition to cyclosporine during the first 15 d after transplant. 3) For transplant, it is not necessary the clean room as described in the manuscript. 4) The experience of cord blood transplantation (CBT) has been limited in patients with SCD, with a total of 33 cases reported, two thirds of whom were in the related donor setting (Hsieh et al. 2011). The majority of related CBT have been 6/6 HLA-matched. In unrelated CBT, although more feasible for pediatric patients on the basis of the availability of 4/6 HLA-matched cord blood unit, it appears to be associated with a great risk of graft rejection and GVHD. The largest study consisting of seven patients reported one death, an EFS of 43%, five patients developed acute GVHD, and one patient chronic GVHD (Adamkiewicz et al. 2007). Moreover, CBT for adults is limited by the necessary total nucleated cell count per kilogram of body weight for engraftment to occur. At this time, transplant should be safely extended to patients with SCD using HLA identical donors, minimizing morbidity and mortality. The attainment of tolerance should allow extension of this curative approach to alternative donor sources.		his/her contributions to the paper I searched and found the reference on Adamkiewicz et al(2007) I have inserted and used the suggestions of the reviewer to improve the quality of the paper. However cord blood screening and transplant is not the focus of this paper. With my preceptor we spent over 6years conducting cord blood screening at Tulane Medical school on sickle cell studies.
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	It isn't correct about the use of cord blood transplant reported in the manuscript.		
Title and abstract			
Introduction (<i>Is the problem/objective of this study original, important and well defined?</i>)	The study is original but it is not well defined		It focused on why BMT transplant is needed
Are all the references cited relevant, adequate? Are there any other suitable current references authors need to cite?	Not all the references are corrected (Massimo?)		References have been corrected
Materials & methods (<i>Kindly comment on the suitability of the methods. Sufficient details of the methods should be provided to allow peers to evaluate and/or replicate the work</i>)	More details must be reported about the type of transplant, the different conditioning regimen especially in consideration of adult and pediatric patients.		This is project review not an empirical study. Material and Method are unnecessary
Results & discussion (Kindly comment on: 1. Are the data well controlled and robust? 2. Authors should provide relevant references during discussion. 3. Discussion and conclusions should be based on actual facts and figures. Biased claims should be pointed out. 4. Are statistical analyses must for this paper? If yes, have sufficient and appropriate statistical analyses been carried out?)	Not all the data are corrected and controlled and the discussion is not sufficient for the objective of this study		In the same vein, this is project review, it is not an empirical investigation, the use of results and discussion are not required The paper has been corrected and all the corrections are highlighted in YELLOW.
Are there any ethical or competing interest issues?			
Conclusion (<i>Is the conclusion supported by the data, discussed inside the manuscript? Conclusions should not be biased and should be based on the data, presented inside the manuscript only</i>)	The conclusion are not supported by sufficient data		The conclusions are supported and the project is basically alerting medical administrators in the developing and and least developing nations about the need to integrate ELSI of MBT in their health system
References	The references must be revised		The references have been revised Thank you.