# Ethical Issues Surrounding the Exportation of Samples from Developing Countries II

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**ABSTRACT**

This article is a second part of a two-part-series article on the exportation of samples from developing countries. The study set out to determine the ethical issues surrounding exportation of human tissues from developing countries.

The specific objectives were to determine the following:

- What are the benefits of exportation of human samples to developed countries?
- What are the risks of exportation of human samples to developed countries?
- Do African Research Ethics Committees have concerns with approving research proposals requiring exportation of samples?
    - If there are concerns, what are the concerns?
- Is there exploitation of developing countries in the exportation of samples?

A systematic search of literature was done resulting in a review of 91 articles. The first two specific objectives were addressed in Paper I (in JABS 2012**,** 1(2):86-89). This paper focuses on the outcomes of the last two specific objectives.

## CONCERNS REPORTED BY RESEARCH ETHICS COMMITTEES.

A number of studies have reported that Research Ethics Committees (RECs) in developing countries have concerns over exportation of samples. Andanda[1] and others[2,3] have reported these to range from insufficient training of members to inadequate review of submitted proposals and poor funding to support the Committees. Genetics research and storage of body tissue are reported to have increased the work and challenges being faced by RECs. Auray-Blais & Patenaude[4] have reported that some RECs have rejected research where storing coded samples formed the integral part of the study. These studies are reported to have been rejected because the RECs were concerned that there may not be participant protection, and further that there may be uncontrolled use of the body samples. The concerns that are being raised are valid as some participants who are consenting to have bloods and other tissues stored may not have a full understanding of what sort of investigations can be done on their samples. While researchers are expected to conduct themselves in a professional and ethical manner, it cannot be ruled out that there are some researchers who don't. Based on types and size of some research being conducted in developing countries[5] one cannot help but conclude that some researchers conduct seemingly minor/harmless research just to get access to body tissue, which they then use to do other unethical/unapproved research. We further speculate that some researchers sell the specimens to laboratories unknown to the RECs for the development of drugs.

Clinical and basic research move to a global level, particularly the recent tackling of major health issues in the developing countries by developed countries[6] has led to a "desperation" to get human tissue, which if not watched could lead some researchers conducting themselves in an unethical manner. Given possible outcomes of genetic studies, RECs and, in fact, countries/governments, ought to be concerned. Questions that arise include: Are RECs to operate on trust that exported samples will always be used only for what was approved? For example, would samples be destroyed after the stipulated studies had been accomplished? Human specimen equals data and so there is need for the protection of individual rights of persons taking part in research. RECs are also concerned about the dignity of sources and need for protection against stigma and social discrimination. Further, there are uncertain implications of research findings to individuals, families,

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people groups and countries. Specimens are "gold" and so there are possibilities of huge profit after the research would have been conducted using the specimens (plus publications which often do not include researchers in developing countries). Besides the above, the shipping of samples is adding challenges to RECs (and research sites) as courier companies and airlines often require proof on safety of transportation of samples.

Skene[7] has asked whether it is ethical for scientists to conduct research in another country if that research would be unlawful, or not generally accepted, in their own country and concludes that there are no ethical reasons to prevent scientists from doing research or using research results in their home countries, even if the research did not comply with laws in their own country. The same author urges that laws should be more flexible to accommodate rapid scientific advances and concludes that there is no legislation preventing the use of research results from developing countries even if it fell short of, for example, Australian requirements. Genetic screening in developing countries could translate to exploitation of participants because it may amount to conduct of research that could not be conducted in the sponsoring countries a situation considered as imperialistic[8]. Explaining this concept further, the author[8] states that conducting clinical trials in developing countries that would lead to therapies that benefit the citizens of those in developed countries is a great controversy and exploitative[9,10,11] and concludes that that which could not be practised in a research sponsoring country should not be done in another simply because of socioeconomic conditions as this was an act of injustice. Verastegui[12] has called the above issue one of the greatest concerns in medical ethics - biomedical research and argues that besides exploitation, when risky studies are conducted in underprivileged countries (where often the participants do not have medical aid or insurance), the underdeveloped country runs the risk of having to spend more money on research-related injuries long after the researchers will have left the host country. Although poverty, limited health care services, illiteracy, cultural and linguistic differences, and limited understanding of the nature of scientific research neither cause nor are necessary for exploitation, they increase the possibility of exploitation[13].

It appears to be a contradiction that developers of research guidelines and regulations are on one end stressing the need for compliance to contents of these documents such as respect of persons and equity to name but a few, while on the other hand overlooking unethical research when conducted in some countries. Some researchers from developed countries continue to say that RECs in developing countries should raise standards and abide to international regulation, while others are willing to conduct research that is not 'properly reviewed' so as to save money. Shouldn't this be called hypocrisy (or double standards) if these countries and researchers see the shortcomings in eg. Africa but are not prepared to do anything about it? It is a paradox that a competent researcher would want to do research in a setting where there are less stringent ethical regulations and guidelines for surely that which is wrong in a developed country ought to be wrong in a developing country[14].

Reasons why researchers prefer to conduct their research in Africa are given as: research costs less, involves lower risks of litigation; and that research proposals undergo less stringent ethical review[15]. Perrey et al[16] have reported that there were perceptions by some researchers that countries in the South constituted guinea-pig populations for researchers in the northern countries.

Some international research regulations are often not applicable or adhered to in some research conducted in developing countries reporting how the Food and Drug Administration (FDA) decided that research studies submitted to it for review would no longer be bound by the Declaration of Helsinki but that they would only need to follow sponsors guidelines for Good Clinical Practice (GCP) outlined by the International Conference on Harmonisation[17]. The author[17] poses a question on the legal status of the Nuremberg Code and the Declaration of Helsinki and also asks whether the regulations were outdated ethical rules that researchers could ignore with impunity. This would appear to be the case given the Pfizer scandal in Kano, Nigeria[8,17,18]. Laudes[19] places a challenge on developed nations to honestly assess their actions and abstain from the exploitation of ethical loopholes in the ethical principles by manipulating them and using them to exploit vulnerable populations. Therefore, local Principal or Co- Principal Investigators (PIs/Co-PIs) should pay attention to more than just their own financial benefits but must consider their own integrity and the benefits studies they participate in would bring to the people they represent.

Weijer[20] has reported the lack of a Data and Safety Monitoring Board (DSMB) in the site where their study was conducted in Guinea-Bissau and concludes that this ought not to happen. While the need for DSMBs is important regardless of the research setting - developed or developing country; the challenge is even greater when a study is conducted in a setting burdened by disease, poverty and limited health facilities (especially when compounded by serious adverse events and reactions in clinical trials). The author urges that the lack of finances was not an acceptable reason in clinical trials given the levels of vulnerability of the participants in the said research setting. In clinical trials there is usually hardly any guarantee that the participant will get any direct benefit from the study as

they could be randomised onto a control arm that could have less effective treatments outcomes or even an arm that has more side effects[21]. This makes the need for DSMBs very crucial.

Often reported by RECs are researches that do not include a local collaborator. In some cases, where studies have local collaborators, these collaborators seem to be willing to endorse any procedure to the detriment of their own community/countries. What is it that makes them so blind to the ethical issues in the studies where they are the local PI? Is it monetary gain or maybe the fact that they do not simply understand the nature of the study? Or how else can one explain the 'inability' of some high-profile researchers to adequately weigh the risk/benefit ratio? Pressure on staff in academic institutions to conduct research and publish their findings as a requirement for promotion has tempted some researchers to compromise on ethical standards[22]. Another concern is whether participants are legitimately consenting to research.

## CONSENTING

A number of authors[23-29] have reported that participants may not be given the opportunity to fully process what they are consenting to so that they could give informed consent. In these situations where participants are not given appropriate information about the methodology of a study, the issues of informed consent take a different dimension altogether. For how is a participant to consent to a study that is full of medical jargon? This is because some words used in the information sheets and consent forms do not have an equivalent in some languages for examples Zambian Languages. Another problem is given a paternalistic society like Zambia (where a health professional is believed to only do that which is best for the patient) the participant could consent to donating samples thinking it is in their best interest. This would be exploitative if researchers/clinicians are capitalising on the ignorance of the research participants.

Hemminki[30] also raised the issue of long consent forms with difficult language. This is commonly seen in studies that are designed in developed countries, making the back to back translations in some African languages very verbose. Participants in Verastegui's[26] study reported that the consent forms were very long and that at times they did not understand the content. Others reported that they did not see the need to read the documents, as they were confident their doctors' explanation was enough. Gikonyo et al[29] recommend the need for researchers to "take social relationships seriously" even though this may not be possible when researchers use previously collected human tissue like that held in national biobanks.

Obtaining consent is an interactive process[23-25, 27-28] which is influenced by the various social, cultural and economic factors. Hemminki[30] cites persons in his study who did not see the rationale for requesting for consent to do procedures or activities in clinical settings that they did ordinarily in their work. There is a difference between professional and research ethics, it is not right to assume that what is commonly practised in clinical practice should not be subjected to the consent process when doing research (or even clinical practice). What is being discussed here often contributes to therapeutic misconception. Jegede[8] argues that when research proposals' information sheets and consent forms do not address the needs, beneficence and harm reduction for participants then it amounts to exploitation.

Countries that lack RECs are at greater danger when the authorities in these countries allow research to be conducted without the input of local reviewers for example the Pfizer study in Kano, Nigeria which was conducted in a hospital that did not have a REC[8]. The researchers requested for verbal consent for such a study (something that would not be accepted for a clinical trial application in UNZABREC as it would be against set Standard Operational Procedures – SOPs and Zambia's legal framework regulating health research). This underscores possible consequences when countries do not have RECs. To conclude on consenting: one off consenting (to donated samples and have them exported) may not be the best model for developing countries. This is because this kind of research has far researching consequences for these communities and countries[31]. There is therefore need for researcher to give the consenting process the time required to obtain *informed* consent from participants and also factor in adequate time for submission to RECs for ethical review.

## THERAPEUTIC MISCONCEPTION

Dresser[32] raises the challenge of therapeutic misconception which could negatively affect the consenting process as donation of samples could easily be seen as part of clinical process for therapy. Therapeutic misconception arises when people with a health problem participate in studies investigating that problem and that individuals accustomed to receiving medical care for their disorders assume that enrolling in a study is simply another way to obtain treatment. Although some research participants may receive a health benefit, research is designed to generate data that could lead to improving care of future participants but should not be done on a people group for the benefit of another country.

Based on the above presentation it can be seen that in studies done among vulnerable populations research participants are

more susceptible to harm given their position. The limited health facilities (which is the status in some developing countries) make research cites appear as an extension of the health care system because of the additional services that they offer participants. The donation of samples in such a setting is often seen as part of their health care and not for research when explicit informed consent is not obtained.

Ogundiran[32] discusses the need for capacity-building for RECs in Africa and encourages individual clinicians/researchers to commit to upholding high ethical standards and principles in research. Besides financial constraints faced by developing countries, Hardy et al[33] reports the lack of skilled human resources and political will. The authors recommend the need for developing countries to form strong collaborations and uphold their dignity so that they are not exploited by other countries.

Andanda[1] and Kirigia et al[3] have indicated that there is need for RECs in developing countries to be very cautious when reviewing proposals with methodologies requiring exportation of samples by ensuring that the researchers factor in benefit sharing agreements. There is also need for research proposals to clearly indicate the types of research that would be conducted with the donated samples plus the development of appropriate informed consent forms. Additionally, further studies on exported samples need to have proposals reviewed and approved by the RECs and should have a local Principal Investigator. Material Transfer Agreements (MTAs) should be in place and should clearly tabulate all the key items like where the samples will be stored, who would have access, control, sharing of intellectual property rights, authorship, handling of left over samples and so forth. RECs should also ensure that MTAs are signed and should monitor what is exported in collaboration with appropriate law enforcers (a process that Zambia has undertaken).

While Andanda[1] advocates for strong "checklists" to be developed when reviewing such research proposals others[34] have recommended the development of a global consortium that would address these common ethical issues and the need for RECs in developing countries to institute local and regional regulation frameworks and legislation to interpret international regulations and guidelines[35]. In relation to genomics, Seguin et al[36] have recommended the need for developing countries to build own infrastructure and develop capacity in order to improve the health of their own populations.

RECs should ensure that consent forms are simplified and understood by the participants[8] and Devasenapathy et al[18] have recommended stringent mechanisms for accreditation and quality control for RECs especially those in developing countries and that together with their governments should work towards ensuring that drug trials are specific and socially relevant.

## CONCLUSION

The exportation of samples from developing countries to be developed countries for storage or analysis has benefits given the many financial, human and infrastructure constraints that researchers in developing countries have. In spite of this, there are many ethical issues surrounding the exportation of samples. These seem to greatly outweigh the benefits of exportation of the said human samples. There is therefore need for developing countries to critically re-evaluate research policies, guidelines and MTAs before studies requiring exportation of samples are approved so as to minimise exploitation (given also that the samples only move in one direction- from South to North). There is an urgent need for strengthening of North South collaborations by making the process more transparent, and for long term, developing countries ought to develop capacity for research in-house or in collaboration with countries with similar needs so that they are not exploited further.

Zambia, through the Health Research Act of 2013 has made provisions for the regulation of exportation and importation of samples. Section 50 of the said Act reads " **50.** (1) A person shall not export or import biological materials without the prior written approval of the Authority as provided under subsection (2). (2) The Authority may, on the recommendation of the Board, permit the export or import of biological materials if all the prescribed elements of a material transfer agreement are met. (3) A person who contravenes this section commits an offence and is liable, upon conviction, to a fine not exceeding two million penalty units or to both". Zambia has lifted the ban on exportation of samples and now uses the above law and written requirements by the National Health Research Ethics Committee (NHREC) to allow for exportation of samples. The requirements include the following,

- Person/s exporting the samples
- Reason for exportation
- Detailed contact details
- Person/s to receive the samples including detailed contact details
- Specifications of samples being exported and laboratory details where they are being sent to.
- Type of analysis to be conducted

Of note is that the samples being exported will always remain the property of Zambia and the regulating authority ensures that the samples are only used for approved purposes.

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