

INTERVENTIONS

Is Africa part of the partnership?

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Abstract

This essay presents an African perspective on medical research partnerships done in Africa. While African institutions have a long history of establishing research partnerships with Western institutions it is important to assess how they have been contributing to this relationship. After describing how partnerships are established and how they currently function for many institutions, I discuss how mutual and antagonistic interests can affect those global health relationships that finish in ‘divorce’. I end with defining the place of Africa in its partnerships with Western institutions in medical research, and argue for a new mind-set that would bolster African ownership and funding of research done in Africa.

Keywords

Africa, global health, partnership, research

Introduction

As the regional representative for Epicentre (the research arm of Médecins Sans Frontières or MSF) in Africa, part of my work involves developing and nurturing medical research partnerships. These partnerships are made with hospitals such as Maradi Hospital in Niger and Mbarara Regional Referral Hospital in Uganda, where we have our two research bases in

Africa.¹ They are also made with universities in countries where we implement research activities, such as Mbarara University of Science and Technology (MUST), and with international universities, including Harvard University, with whom Epicentre ran a clinical trial to improve the management of the treatment of children with severe malaria in Uganda (Mwanga-Amumpaire et al. 2015). In some cases partnerships with private and/or nongovernmental organisations are formed. For example, during the recent Ebola outbreak in West Africa, Epicentre worked together with the World Health Organization (WHO) to assess the safety, efficacy, and immunogenicity of the Ebola vaccine candidate rVSV ZEBOV with support from the pharmaceutical company Merck and other governmental institutions from Canada and Norway (Henao-Restrepo et al. 2017).

In this essay, I discuss some of the aspects of medical research partnerships involving African and Western institutions from my experience as a global health researcher based in Africa. I first describe the roles and responsibilities of the partners in a ‘classic medical research partnership’, and their mutual and antagonistic interests. Then I define how the arrangements are made before concluding that there is a need for a new mind-set for partnership in Africa. My essay offers commentary on the perspective shared by Iruka Okeke (this issue), with whom I am currently collaborating to assess the contributions of African researchers to medical research performed in Africa.

‘The classic medical research partnership’

Much like a prenuptial contract, research collaboration agreements aim to define the roles and responsibilities of partners, as well as the rules of partnership. What do we do before, during, and after the relationship, especially, as mentioned by Okeke (this issue), when we have seen that most global health partnerships (unlike scientific collaborations) are temporary and end in ‘divorce’?

In a majority of global health partnerships that I have seen, African institutions provide field sites, patients, samples, and data, while Western partners provide funds and technical expertise (especially for data analysis, interpretation, and writing). The burden of physically carrying out the research often falls on the African partner. In the site where the research takes place, African institutions and investigators ensure compliance with protocols that they may not have been part of writing. They usher the protocols through the proper approval channels, including submitting them to the ethical committees and the office of the head of state when needed. They hire and train local investigators to enrol research participants and

¹ For further information, please see: <http://www.epicentre.msf.org/en>.

collect only the data and samples delineated by the protocols. This is particularly the case in clinical trials that involve several sites, often in different countries. In Uganda, for example, I have seen some studies where it was almost impossible to make any change in the research protocol, leaving local staff with no option other than to implement it literally. This was done to ensure standardisation across sites, but the result was that insightful ideas from local investigators were not included in the research and opportunities to answer important questions relevant for the local community were missed.

In the course of the partnership, some Western institutions provide money to implement the activities that they supervise remotely and through field visits. This supervision ensures that the protocol is followed according to international standards and that any challenges that arise are dealt with. In some cases, the two partners share some duties. Data and/or samples may be analysed in Africa, or shipped to the Western partner where they are (re)analysed. As Okeke (this issue) also notes, in the large majority of partnerships the Western institution leads the interpretation of the data and the dissemination of the results at international conferences and publications in peer-reviewed journals. Additionally, most scientific journals publish in English, biasing authorship towards Western partners. Some manuscripts that we submitted for review to peer-reviewed journals required editing by a ‘native’ – in other words, American or British – English-speaking person. While it happens more to francophone researchers, I have seen Ugandan colleagues also face the same challenge, highlighting the need for fluency in American- or British-style English. This could give the impression that the ‘translator’ rather than the ‘field actor’ tells the story.

Based on the partnership’s research findings, partners can decide to stop collaborating or progress together. In cases where the findings have the potential to change policy, in most instances the partnership will continue for a while. At this point, the partners play their roles depending on their respective interests. The question arises as to who should promote the research findings, and who has the means to do so. In some situations the Western partner will communicate the research findings within the international arena (such as at WHO meetings) while the African partner will lobby at the national/regional level, aiming to change or adapt country policies based on the new evidence gathered by the study. However, this could also be the result of a power dynamic in which the team considers the African partner as ‘local’ and the Western as ‘global’. I see quite often results of studies presented orally in international conferences and meetings by the Western researcher, while the African researcher is given the ‘opportunity’ to stand in front of his poster to present a smaller part of the results in the same setting or at a local conference. Deciding who does what involves assessing the availability of funds to move in local versus international forums as well as the political will to share (or not) the responsibilities and mutual interests.

Mutual or antagonistic interests?

I agree with Okeke's argument in this issue that any person or institution who decides to take part in a research relationship has their own interest(s) in mind. The challenge in partnerships is whether the interests are mutual or antagonistic, in which case they may harm rather than be beneficial. Although a 'true' partnership should be mutually beneficial, the interests of both parties may not be the same but can be achieved using the same activity. Where African institutions are involved, the major interest I have seen has been in building institutional capacity. There is a willingness to have more and more well-trained researchers who can develop a research agenda and attract funds for its implementation. Most African universities view partnerships as opportunities to train young (and sometimes not so young) researchers, and to answer meaningful questions about challenges in their environment and/or community. However, we also see a few researchers who have more interest in their own self-promotion at the expense of their institution and colleagues. In this case, the funds allocated are not well distributed among researchers but rather shared among a few people, as may also happen in some Western institutions.

Depending on the strength of the relationship, partners can go beyond their initial interest to help fulfil the other partner's interest. For example, Mbarara University of Science and Technology in Uganda requested support from Epicentre to better understand the burden and the best way to diagnose brucellosis in Uganda. Brucellosis is a zoonotic disease found in southwestern Uganda that occurs due to close contact between human and cattle, which can lead to fever, incapacitation, and sometimes death (Miller et al. 2016). Though brucellosis was not part of Epicentre's research agenda, building research capacity by mentoring students and faculties to work on such a project is part of its mandate. Therefore, Epicentre has been and is supporting the university to collect preliminary data that will allow them to apply for more funding from other partners in order to answer these important public health questions. This is usually the case for neglected diseases and topics that attract less attention from the international research community and, therefore, fewer funds. On the other hand, I have seen Western researchers living in Uganda who are not solicited by local researchers even though they are genuinely willing to provide technical and even grant writing support. Some are perceived by local researchers as not having money to support collaboration, and/or are considered people who may 'steal' data for their own publication.

The Western partner's interest is usually to generate knowledge and answer questions asked in the research protocol while building its own research capacity. This is highlighted by Okeke (this issue), who has suggested that very little of the articulation work seen in partnerships between African and Western institutions is actually centred in African countries. Following Joan H. Fujimura, Okeke defines articulation work as 'that scientific activity necessary for acquiring resources and generating publications', which eventually

‘does not directly generate data but builds careers’. In such cases, junior Western researchers are leading research in Africa, which provides them with first-author publications that are critical to boost their careers. Mutual interests could easily become antagonistic in the sense that African researchers may also need the same first authorship position. This tension may cause partnerships to stagnate or fracture when an agreement cannot be made.

To assess the reality of this tension, Okeke and I decided to evaluate the contributions made and recognition received by African researchers for health research done in Africa. In brief, we calculated the proportion of articles in which African authors were either the first or the senior author that were cited in PubMed from research performed in Africa on HIV, tuberculosis, malaria, Ebola, salmonellosis, and Buruli ulcer. We also looked at the proportion of African authors in more than five thousand screened publications in the last five years as well as at the funding sources. While our analysis is still in progress, we are finding that between 30 per cent and 60 per cent of articles published had an African first author, while less than 35 per cent had an African as senior author. Moreover, less than 40 per cent of the authors that contributed to publications from studies performed in Africa had an African institutional affiliation. The data differs depending on the disease and/or country, and shows that some African and Western institutions are managing to reach a common interest where African researchers not only lead the research in the field but also tell the story. However, at the same time it was shocking to find articles published in prestigious peer-reviewed journals presenting results of studies of Ebola with data and/or samples collected in Africa without any African authors (McElroy et al. 2014; Nouvellet et al. 2015; Yan et al. 2015). While I wonder if the authors had just ‘fished’ the data from Africa, I also question how a reputable and peer-reviewed journal can publish such unfair articles. Lastly, I wonder why the African countries where the studies took place have not complained about it or requested that the journal publishing these articles simply withdraw them. I am left wondering what to do to change this neocolonialist system.

It is also important to highlight that partners’ interests also depend on the availability of funds, which usually come from the West. Therefore researchers adjust their interests and aims to be in line with funding priorities set by funding agencies (such as the National Institutes of Health and the Bill & Melinda Gates Foundation), which may or may not be local priorities. Though a number of Western institutions are championing ‘capacity building’ for medical research in Africa, it is interesting to see whether they provide incentives to their faculty members who invest their time and effort to achieve that. How many Western institutions will support their faculties who say, ‘I am building capacity even though it is not the optimum use of time/money, to make the world a better place?’ In other words, how many capacity builders are rewarded not based on an expected number of publications but rather on the number of mentees who are the next generation of African researchers? One

of them is Mark Siedner, who received the Young Mentor Award for 2014–2015 from Harvard Medical School for training and supporting young Ugandan students and researchers. On the other hand, how many African researchers are given enough time or money for research as compared to the money they can get in teaching and private practice? Few.

Lastly, we must ask: is research in Africa done for publication, or for changing practice and policy that impact the local population in a sustainable way? Many partners aim for both. However, Okeke's (2011; also see Okeke this issue) example of a partnership between the US Centers for Disease Control and Prevention and health care providers at Kenema Hospital in Sierra Leone, which resulted in the development of a rapid and sensitive diagnostic test for Lassa fever, brings a negative perspective. The fact that local patients benefited from the rapid diagnosis and treatment for Lassa fever during the trial but not during the devastating Lassa fever outbreak that took place four years after the validation of the tests based on study results is unacceptable. Moreover, while we see almost all research findings appearing in peer-reviewed journals, we don't often see those findings disseminated in local journals or newspapers that are likely to be read by the local community and politicians where the studies took place. Policy makers do not often read articles written in technical language and published in scientific journals that may not be accessible to them. This makes me wonder to what extent African stakeholders are considered after the research findings are published in scientific journals. This happened to me some time back when one of my master's-degree students found out that a combination of two laboratory methods could significantly improve the detection of malaria in children having fever. These interesting results were published in an international peer-reviewed journal with the support of our Western partner. However, we could not reach an agreement to also publish those results in a local newspaper, which carried the same price as the peer-reviewed journal but was read by Ugandan policy makers, politicians, and general public. This power dynamic is usually dictated by the availability of funds, especially when a study is completed.

It would be interesting to find out how many people in Africa would buy a newspaper showing research findings. I believe that any person would be interested in a fact that can improve their quality of life, when translated into layperson's language. This was indeed the case of the AQUAMAT clinical trial that aimed to compare a derivative of Artesunate to quinine for treatment of children with severe malaria in Africa (Dondrop 2010). The consortium of research institutions from Western and African countries performed clinical trials in several African countries. The results were well disseminated in local, national, and international forums and led to changes in malaria control policies worldwide (World Health Organization 2015).

How is an arrangement made?

In some cases, global health partnerships are initiated when a researcher from a public or private institution in the West contacts a researcher in Africa to implement a research protocol that involves access to patients and/or samples. When samples are involved, they are often transferred by air from African study sites to the West, with funds and often researchers flowing in the opposite direction. The simplicity, and perhaps superficiality, of this approach is well encapsulated by an African researcher I met at a conference in Arusha, in 2009, who said: ‘You [Westerners] have the money; we [Africans] have the patients’. The two researchers ultimately make an “arrangement” and organise the deal.

Such arrangements can be made informally and sealed by a handshake (Crane 2011), or more formally through a fully legally vetted memorandum of understanding (MoU). Somewhere between a unwritten, handshake agreement and the other extreme of a MoU, we can envision the use of a simple written agreement wherein the partners establish a mutually beneficial arrangement without the need to involve the expense of a cadre of lawyers and advisors. Regardless of the format, an agreement between research partners needs to outline who does what, specifying the roles and responsibilities of the partners. Some partnerships require a MoU that in some countries has to be signed in the office of the head of state. An MoU provides a strict working agreement that details the roles and responsibilities of each partner, similar to a prenuptial contract, but it can sometimes cause the end of the arrangement even before the study begins. For example, when I was leading our research centre in Uganda we had to delay the start of a study for almost a year because the two sides did not agree on one critical point of the MoU: authorship. We struggled to agree on who would be the first and senior authors of the main publication of the proposed study, before the research actually started. We eventually agreed (as we suggested) that the Ugandan researcher who was the principal investigator would be the first author while the most experienced researcher from the United States would be the senior author. This seemingly simple resolution that took a year to be made shows how difficult it can be for Africans to be seen as equal partners. Within this power dynamic, we managed to stand firm thanks to the backup support of Epicentre and the possibility we had to attract other funds, which is not the case of most typical African institutions.

Yes, Africa is a partner – but a new mind-set for partnership is needed!

Africa is definitely part of such partnerships. However the critical point raised by Okeke (this issue) asking ‘whether “partnerships” bring a net gain to African knowledge creation’ has to be emphasised. The responsibility lies with Africans to decide on which short-,

medium-, and long-term gains we are aiming for. Africa sits at the table and decides whether the research should and can be done on its soil. The data and samples are collected and sent by Africans to Western institutions as agreed in the arrangement. While this agreement could be seen as fair – Africans manage the field research while the West manages the end products – this type of arrangement has been happening since colonisation. Africans provide raw materials that are transformed by Westerners and sold back to Africans at a much higher price that is often not affordable to the local population. For example, just as premium Swiss chocolate is not accessible to the Cameroonian or Ivorian farmers who grow the cocoa used to make the chocolate, a large proportion of scientific articles published using African blood are not accessible to most Africans who contributed to them.

Ideally, there should be a change in Africa toward local transformation of raw materials to semi- or fully finished products. Collected samples and data should be analysed and interpreted locally so that Africans control their own narrative. This could be done in partnership with Western researchers who bring other expertise and support.

In the new partnership era, the focus should be on ‘real’ capacity building to ensure that African institutions steer their own research agenda that they can define with their partners. This new partnership should build and transfer truly empowering articulation work and knowledge-making capacities in both Western and African institutions, as compared to what is happening now (Okeke, this issue). To achieve this, both partners should change their approach toward research in Africa. Western institutions that genuinely want to build capacity for research in Africa should better reward their faculty for international teaching and mentoring. Just as researchers are rewarded for their publications, new policies should be put in place to reward researchers for the time spent in teaching, volunteering, and mentoring young African researchers, even in the absence of publications.

While in most Western universities researchers can (and must) dedicate time for research as they earn money and promotion for research activity, most African researchers are not incentivised enough for the time they dedicate to research. Therefore, there is a need for a more conducive environment where African researchers can have a successful career by doing research and be promoted for doing so. The time for research should be as valued as the time for teaching, and the pay should be sufficient to allow researchers to live a reasonable life. To achieve this goal there is a need for extra funding dedicated to building ‘real’ research capacity, which could come from African philanthropists. Moreover, African institutions should commit to better governance to limit corruption, protect research time for junior faculty, and provide the required environment for research and its uptake.

I conclude that after sixty years of independence for most African countries, the time has come for a more equitable interdependence, one in which Africa takes a more beneficial part in successful partnerships. Though the challenges highlighted here – such as inadequate rewarding of researchers – are not specific to African–Western partnerships, the power dynamic that is responsible for this inequity is more prominent in our context. Therefore, the new election of an African to the position of director general of the World Health Organization, the creation of the Africa Centres for Disease Control and Prevention, and the creation of *Medécins Sans Frontières* Western and Central Africa should be opportunities to create a platform where all stakeholders (academics, public and private donors, research institutions, health actors, African Academy of Sciences, Next Einstein Forum, African Philanthropy Forum, African Leadership Network, editors of scientific journals, and more) could meet to define new rules for equitable partnerships that will bring about the change requested by African scientists (Nordling 2015). This platform will also be useful to discuss inequalities and confront differences to strengthen global research, as urged by Wenzel Geissler and Ferdinand Okwaro (2014). Lastly, I believe that this essay will contribute to changing the partnership mind-set towards a greater recognition of African researchers, who provide innovative and home-grown solutions for a healthier Africa.

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