

Ethical Medical Research: An Imperative for African Countries *Swithern Chinhema*

Introduction

The argument of this article is that developing, strengthening, and sustaining comprehensive and ethically sound medical research through prioritisation, local funding and increased investments is an imperative for African countries. The basis of this argument is that there are pressing health needs in Africa and a significant gap in medical knowledge necessary for the development of the much-needed medical solutions. Thus, the proposed research makes it possible to generate knowledge and other related initiatives necessary for prevention and cure of diseases as well as improving human health. Through the same research, medical innovation, drug discovery and testing, development of medical technologies, new and improved diagnostic and therapeutic interventions can be systematically and ethically done. Informed by the values enshrined in ubuntu, I propose that the new knowledge obtained from research and other discoveries must be translated into health system improvements, innovations, and development. To make this a reality in Africa, there is a need for breaking the cycle of dependence (which brings complacency and hampers innovation) through ownership and adequate sponsorship of the research agenda. This entails a significant shift from foreign funded and owned medical research to African designed, owned, and controlled research which are contextually relevant and informed by local needs.

What and Why Medical Research in Africa?

As suggested by its title, this paper argues for the necessity of developing, strengthening, and sustaining a comprehensive and ethically sound medical research in Africa and importantly by African researchers. Two questions are key for the development of this argument. First, what is the nature of such research and why is it necessary for Africa? Second, how can it be realised given the present situation in Africa? I devote the following paragraphs to answering these two questions in their respective order.

To begin with, this article subscribes to Stefanie Rokosz's definition, which takes research as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalisable knowledge"¹. Medical research in particular produces generalisable knowledge through systematic investigation including but not limited to the human body and its functioning; viruses and bacteria; diseases both communicable and non-communicable; developing, improving, testing, and evaluating existing and new medical products, diagnostic and curative interventions among others.

In the midst of known and unknown diseases and other health related problems, medical research is necessary in Africa. Solving a problem requires rightly identifying it in terms of its causes, factors sustaining it and its effects. The same is true of the health problems facing African countries. Research brings empirically obtained evidence of what, why and how health challenges such as diseases affect humanity and points to some possible medical and non-medical responses to them. Given the health state in Africa, medical research is not only essential but urgently required.

The Current Situation in Africa.

The available literature shows that: African countries are constantly facing life-threatening diseases such as malaria, tuberculosis, HIV and AIDS, among others. The prevalence of these transmittable diseases coupled with the ever-increasing non-communicable diseases such as cancers, blood pressure, cardiovascular diseases, diabetes among others account for reduced life expectancy, high morbidity, and mortality in many African countries. In addition to these, African countries also face some ravaging pandemics such as Ebola and current COVID-19.

According to a research by Harmonization for Health in Africa, sub-Saharan Africa accounts for 49 percent of global maternal deaths, 50 percent of under-five child deaths and 67 percent of HIV/AIDS cases.² Further, the 2019 Global Health Security Index noted that sub-Saharan Africa has the weakest health systems in the world. This is evidenced by, for example, Africa's lower capabilities to prevent the emergence and release of pathogens, and an inefficient capacity for patient treatment and

protection of health care workers.³ Further, the absence of diagnostic tools and preventive equipment poses a major risk to health care workers in their fight against diseases, especially highly contagious ones. For example, a significant percentage of health workers lost their lives in the fight against Ebola in West Africa.¹

Despite these alarming statistics, there is a huge knowledge gap in Africa due to lack of proper medical and scientific research. For example, research into the factors that facilitate the increase in non-communicable diseases and the best therapeutic measures that can be taken to respond to them. No meaningful investments (both public and private) are channelled towards the development of medical research. Kasprovicz et al noted with concern that despite the fact that Africa bears 25% of the global disease burden, Africa produces only 2% of the world research output.⁴ Simpkin et al also argued that the pharmaceutical industry in Africa (which could possibly compliment government efforts) remains limited in terms of its capacity. As a result, the production and manufacturing of drugs relies much on importation of active ingredients.⁵

Effects of Lack of Investment into Medical Research.

The prevalence of diseases coupled with the lack of proper medical research has resulted in Africa becoming the supplier of raw materials, including human subjects for research and a market for finished products, substandard and counterfeit medical products included. For example, in Ghana, drug inspectors found counterfeit antimalarial tablets in a rural dispensary.⁶ A similar incident occurred in Cameroon where falsified chloroquine was found in pharmacies and hospitals with claims that it will cure Covid-19.⁷ Furthermore, as argued by Morel et al, the deficiency in research results in inability to develop solutions to critical healthcare challenges.⁸ This creates a vacuum in Africa which is then fielded with medical researchers from the developed world who flock in to do research

¹See, World Health Organisation, A preliminary Report: Health Worker infections in Guinea, Liberia, and Sierra Leone. 21 May 2015, WHO.

especially human experimentation in the form of clinical trials.⁹ It is despicable that African countries are not benefiting much from these research projects but suffer exploitation as many of them do not follow strict ethical and legal standards.

Khalid Mahmood shared the same view as he noted that there has been a significant shift of focus for medical research from the global North to the global South. He explains that medical research, particularly clinical trials have become so difficult to carry in the developed world due to high literacy rates, awareness of human rights, strong ethical and legal systems, strong Institutional Review Boards among other reasons.¹⁰ Impeded by these factors, medical researchers and pharmaceutical companies are flocking to developing countries where there is not only an unexploited market for testing new medical products but also less restrictions to conduct research and medical experiments. The danger is as Ndebele et al rightly observed, the growing medical research in Africa (mainly, those funded by organisations from the developed world) has not been accompanied by improved research oversight.¹¹ As a result, the African continent is vulnerable to potentially exploitative research.ⁱⁱ

Has Africa Learnt Any Lessons?

Primarily, the global pandemics have exposed gaps in African health systems, for example, the huge medical infrastructure deficit in many African countries. This makes it hard not only for medical practice but worse still for research and innovation which is mostly needed especially in times of highly infectious diseases. A clear example of the lack of proper health care facilities is Zimbabwe where, during the peak of the COVID-19 disease, schools and other non-health facilities were unsuitably used as quarantine and isolation centres. The African response to health disasters is also hampered by lack of capacity for isolation, testing and treating patients. More so, there is a serious dependency syndrome on externally sourced medical products and expertise. Maintaining this

ⁱⁱFocusing on East Africa, Melisa Graboyes gave a detailed account of some of the abusive medical research projects done in and on Africa(ns). See Graboyes, Melisa. "Incorporating Medical Research into the History of Medicine in East Africa." *The International Journal of African Historical Studies*, 2014, Vol. 47, No. 3 (2014), pp. 379-398.

will see the continued domination and exploitation of African people by external researchers. Therefore, there is an urgent imperative for developing an African model of ethically sound medical research which will see effective medical solutions to the medical problems facing many African countries today.

Way Forward: Ubuntu Based Medical Research.

African governments, people, medical research, and training institutions need to acknowledge the following: First, medical research and ethics is an undeniable priority. The cost of ignoring is unbearable. Second, it is practically possible for medical research to be done in such a way that respects and promotes the dignity of persons as enshrined in ubuntu. The *ubuntu* philosophy gives us the ideals to strive for and the method of attaining them. With its core values of love, solidarity, communality, interdependence, respect, responsibility and above all human dignity,ⁱⁱⁱ *ubuntu* can make a positive impact on how we prioritise and do medical research. The *ubuntu* society is interconnected and inclusive such that what affects one member necessarily affects the community. We exist with and because of the other. The pandemics have further shown the connectedness of humanity as they affect all humanity despite differences in colour, creed, or race. As a result, our response to them must further show this interconnectedness without which we cannot adequately underwrite who we want to be and respond to the challenges that face us.

Significantly, *ubuntu* demands that we protect and promote humanity from any form of danger. Since diseases and other health disasters are dangerous to the physical, emotional, and mental wellbeing and integrity of persons, then the spirit of *ubuntu* calls us to adequately respond to them. In this regard, the inclusiveness of *ubuntu* is necessary in doing

ⁱⁱⁱA detailed explanation of some of these is given by Himonga, Chuma (173ff). "The Right to Health in an African Cultural Context: The Role of «Ubuntu» in the Realization of the Right to Health with Special Reference to South Africa." *Journal of African Law*, Vol. 57, No. 2 (2013), pp. 165-195

medical research. For example, including areas such as mental health, sexual reproductive health, maternal complications, and other neglected areas of medical research into the African research agenda. Inclusivity can also be in terms of people who participate in ethically sound medical research for example, the inclusion of prisoners, women, and children.^{iv}

How Can this Imperative Be a Reality? Bridging the Gap Between The ‘Ought’ And The ‘Is’

As already indicated, two key questions are driving this paper. The above paragraphs have answered the first one which asks, what and why medical research in Africa. In what follows I will answer the second question, how can medical research be developed and strengthened in Africa given the present situation? I propose a three-fold strategy towards the development of the African owned, funded, and controlled ethically sound medical research. Without claiming that these strategies are sufficient in themselves, I am convinced that they can be a starting point for further reflection and action. The first, relates to funding and financing of medical research where I propose increased local investments. Second is about education and training of researchers who are ethically motivated and goal oriented. The third is formulating and strengthening ethical and legal systems for adequate protection of the African population. The proposed strategies shall be understood in consideration of actual and potential challenges to be faced in implementing them.

First Strategy: Robust Funding of Medical Research in Africa.

Lack of funding has been identified as one of the major setbacks to the development of medical research in Africa. As a result, researchers in Africa depend on conditional external funding which in most cases is directed towards the achievement of the agendas of the funders and not the local needs. Realising this problem, Morel et al argued that there is need for funders to support individual approaches that contribute to expansion of a local research workforce with the capacity to develop

^{iv}Most of these are vulnerable to abuse especially in human experimentation, hence the emphasis on the ethical soundness of medical research projects.

contextually relevant solutions and advance national health priorities.¹² I agree with Morel et al on the need for capacitating local research and developing context relevant solutions. However, their solution seems to rely much on external funders which in my view is problematic. African countries need to move away from dependence on foreign funded research and focus on internal investments. There is a need for breaking the cycle of dependence on external funders.

My proposal is this: Africa needs to take research as a profitable investment and move towards self-funded and sustainable research projects. Medical research must be viable and attractive, where researchers show to potential local investors and sponsors that research has an effect on real-world problems and is worthy of committing money to. Every investment must generate profitable returns. Investment in medical research is not an exception, it generates economic returns, reduced health care costs, increased productivity, to mention a few. For example, it is economically and humanly expensive to import medicine and medical expertise than to develop them locally. Governments can take initiatives of starting small but sustainable research projects which will generate more capital for expansion and growth. For example, in 2007, the African Union countries committed to invest at least 1% of their GDPs in research and development.¹³ This was a commendable initiative, yet it remained an unattained dream with countries such as Cape Verde and Lesotho investing less than 0.1%.¹⁴ There is, therefore, an urgent need to revive this and other similar efforts. Further, African governments need to engage the private sector. For example, engaging the pharmaceutical companies to fund and sponsor research projects. Attracting private investment demands reviewing of public policies, and creation of safe political and economic environments for business in Africa.

Second Strategy: Education and Training.

One of the major impediments to the development of medical research in Africa is lack of the required expertise resulting in failure to translate obtained knowledge into tangible and practical solutions. How can this gap be bridged? It must be underlined that medical research is not an end in itself, it is a means for attaining results. Therefore, knowledge

obtained from research must be put into proper use for the development of preventive, protective, diagnostic and curatives techniques necessary for effective preparation and response to health challenges facing Africa today. What we know must be reflected in what we do. For this to happen, Africa needs to put in place policies and strategies for the effective utilisation of the available natural and human resources. This can be done through selection, training, retention, and motivating goal-oriented African based medical researchers.

In line with the above, African countries need to prioritise investments into skills development and motivation to do research. For research to take place, there is a need for competent researchers who are financed enough to do their job. In this regard, development of national and regional research personnel is key. By this I mean, training and capacitation of researchers, medical practitioners, (medical) technology developers who are willing to work in and for Africa. For this to be achieved, relevant and goal-oriented curriculums which stimulate inquiry and promote initiatives in students are to be adopted. Africa needs both knowledge proficiency and practical innovative abilities.

Further, Africa can take advantage of varieties of skills in its people through regional networking. My view is that cooperation and collaboration across the region is necessary if Africa is to develop and strengthen productive and sustainable medical research. There is a need for regional collaboration between researchers, for example in terms of authorship and publications of research findings. Apart from this there is also need for what Simpkin et al call, cross-sector collaboration where medical researchers join forces with researchers and experts from other fields of study such as sociology, philosophy, social work to mention a few. This can foster knowledge generation, implementation, transfer, and alternative funding channels.

It is key for prospective researchers to establish a good relationship with the ordinary people. Based on the oneness of *ubuntu*, it is possible to reduce the gap between researchers and participants. In dealing with engineering in Africa, Mavhunga rightly observed, one major obstacle to its success is that the engineers design *for*, not *with* the society. The point that he makes is that engineering reduces the society to a spectator when

it should be a comrade-in-arms in research and problem solving.¹⁵ I think the same argument applies to medical research and ethics where researchers do research for and not with the society. This is reflected in the way in which researchers deal with their participants who are generally taken as objects to experiment on, without giving them room to contribute their skills and knowledge to the success and progress of research projects. This has to change, as there must be more professional engagement and cooperation between researchers and participants and inputs from both must be valued. In such a way, as Mavhunga argued, solutions will emerge organically from and with the people affected with the problem.¹⁶

Third Strategy: Strong Ethical and Legal Frameworks.

The social, emotional, physical protection of the people is of undeniable value in medical research hence the vital role of ethics. Africa needs not only progressive research but ethically sound one. I acknowledge that in medical research especially research on human subjects, there is a possibility of abuse of unsuspecting participants by researchers. Richardson gave two common abuses. First, intentional, and deliberate misconduct by some researchers who do experimentation on people without their knowledge. Second, purposeful failure to disclose to the subjects some obvious and known risks of participating in an experiment. Richardson further explains that though these are criminal acts they usually go unpunished due to the exalted status of medical researchers and the value attached to their work.¹⁷ The danger of such acts is that they directly violate the dignity of persons and eliminate their right to make informed choices.

I agree with Richardson that offenders in medical research often escape the sanctions of the law. However, this cannot go unnoticed for the dignity of people is irreplaceable and cannot be overridden by the social benefits of medical research. After all, research is meant to promote health and wellbeing of people such that oppressive medical research is self-defeating. In my view, abusing people is detrimental to the very essence of medical research. *Ubuntu* can make a difference in this regard since there is no gap between, first the researchers and the participants, and second between moral reasoning and moral action. It is an ethic embedded in

practice. Therefore, basing on *ubuntu* and without violating the freedom of scientific inquiry, there is need to develop and enforce strong ethical and legal guidelines for adequate protection of research subjects from potential abusers.

One way of ensuring compliance with the ethical guidelines is strict registration, licencing and accreditation of medical researchers and their respective research projects.^v This helps to keep a record of who is conducting what type of research during a particular period of time. A strong guideline enforceable by law must be in place differentiating permissible from non-permissible medical research and stipulating the punishment that a researcher is liable to in the event of culpable misconduct. For example, the law can sanction that grave misconduct attracts the cancellation of a research licence. For this to work there is a need for a regional law which makes it impossible for a researcher banned in one country to operate in any other African country.

The Projected Outcome

If the proposed approach is implemented, it will yield commendable results. First, it will see the development of strong and sustainable health systems, with a healthier people. This is achieved through the creation of a vast pool of knowledge, practical skills and technical innovation for effective preparation, prevention, and response to health challenges. If African countries invest in medical research, Africa will be better prepared to tackle national, regional, and global disasters and pandemics such as the COVID-19 and reduce their human cost. Africa can also make considerable progress in reducing preventable diseases especially the major causes of mortality such as HIV and AIDS.

Second, the development of medical research will ensure informed health policies based on justifiably obtained evidence. Research gives suitable knowledge on how to plan, prepare and respond to existing and possible challenges to human health. As a result, governments can budget and make policies that are relevant and effective based on the knowledge

^vInstitutional Review Boards must be formed and armed with the legal and financial power to do their work.

and discoveries in medicine. In addition, research will also see the development of the capacity for continuous monitoring and progress assessment of health systems. This will positively ensure adequate protection of the African population. Third, investment in skills training and capacitation will see the creation of problem solvers and employers other than employment seekers hence, reducing the number of job seekers in Africa.

Conclusion

In conclusion, this article has argued for the practical necessity and possibility of investing and developing medical research in Africa. African countries need to shift from dependence on foreign research through funding, educating, and empowering the African based medical researchers. The article has noted that the challenges of funding, failure to implement policies, infrastructure deficiency, lack of relevant skills are the major challenges that obstruct progress of medical research in Africa. These challenges, it has been argued, can be overcome resulting in noteworthy progress of ethically sound medical research. Based on the values of *ubuntu*, medical research can make a meaningful contribution to the health and well-being of the African people. It is with clarity that medical research is an imperative for the African continent, thus, Africa must wake up and make medical research a priority.

¹ Rokosz, Stefanie. "Assisted Reproductive Technologies." *Food and Drug Law Journal*, 68:2 (2013) 177-188.

² Harmonization for Health in Africa. *Investing in Health for Africa: The Case for Strengthening Systems for Better Health Outcomes*. (HHA, 2015).

³ Devermont, Judd and Marielle, Harris. *A Wake-up Call What Covid-19 Reveals about Elderly and NCD Care in Sub-Saharan Africa*. (Centre for Strategic and International Studies (CSIS), 2020), 3.

⁴ Kasprowicz, Victoria. O. *African-led Health Research and Capacity Building-Is it working?* (BMC Public Health, 2020), 6.

⁵ Simpkin Victoria., et al. *Investing in Health R&D: Where we Are, What Limits Us, and How to Make Progress in Africa*. (BMJ Glob Health, 2019), 15.

⁶ World Health Organisation (WHO). "WHO Global Surveillance and Monitoring System for Substandard and Falsified Medical Products." (WHO 2017), 23.

⁷ African Union-3S Team. *An African-focused Report on Safety data of Covid-19 related products*. (AUDA-NEPAD, June 2020).

⁸ Morel, Terra., et al. "Strengthening Health Research Capacity in Sub-Saharan Africa: Mapping the 2012– 2017 Landscape of Externally Funded

- International Postgraduate Training at Institutions in the Region” (BMC, Globalisation and Health, 2018), 2.
- ⁹ Sharma, Ajay K., et al. “Clinical Trials in India: A Scientific Approach for New Drug Development.” *Current Research in Pharmaceutical Sciences* 1 (2013) 1-6.
- ¹⁰ Mahmood, Khalid. “Forewarned is forearmed! Unethical drug trials in the developing countries.” *J Dow Uni Health Science* 6:3 (2012) 79-81.
- ¹¹ Ndebele, Paul., et al “Research Ethics Capacity Building in Sub-Saharan Africa: A Review of NIH Fogarty-Funded Programs 2000–2012” *Journal of Empirical Research on Human Research Ethics: An International Journal* 9:2 (2014) 24-40.
- ¹² “Strengthening Health Research Capacity in Sub-Saharan Africa: Mapping the 2012– 2017 Landscape of Externally Funded International Postgraduate Training at Institutions in the Region”, 2.
- ¹³ African Union-3S Team. *An African-focused Report on Safety data of Covid-19 related products.* (AUDA-NEPAD, June 2020).
- ¹⁴ *Investing in Health R&D: Where we Are, What Limits Us, and How to Make Progress in Africa*, 2.
- ¹⁵ Mavhunga, Clapperton Chakanetsa. “Modelling an African Research University.” *Journal of Higher Education in Africa* 16 (2018) 25-50.
- ¹⁶ “Modelling an African Research University.” *Journal of Higher Education in Africa* 16 (2018) 25-50.
- ¹⁷ Richardson, Song. L. “When Experimentation is Criminal.” *The Journal of Criminal Law and Criminology* 99 (2009) 89-134.