Author's response to reviews

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Version: 2 Date: 23 October 2014

Author's response to reviews: see over
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Five keywords or phrases:

Global Health, Development, Nigeria, Collaborative research, Global Partnership,

No ethical approval required

The authors declare that they have no competing interests
Research Partnerships Between Developing and Developed Countries: Are Global Partnerships Always a Good Thing?

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ABSTRACT

Global partnerships in research are receiving ever greater attention, as technology diminishes the restriction of geographical barriers, the effects of globalisation continue and diseases and populations are increasingly mobile. In this article we examine the merits and risks of such collaboration even when strict universal ethical guidelines are adhered to.

INTRODUCTION

The interest and ability to develop global partnerships in the pursuit of research goals is greater than ever, especially with advances in technology and an increased cultural awareness of common issues that face everyone around the world.

It is now nearly universally accepted that with increasingly mobile populations, health issues are less parochial and are of global concern, given that cultural, social health factors and diseases transcend borders. Communicable diseases are not restricted by geography or borders with ever growing migration as the current ebola outbreak illustrates; the NHS continues to look for low cost innovation, especially with recent economic stagnation; and globalisation means the UK is increasingly less isolated in health and economic terms. Thus, ‘Global Health’ has burgeoned from its perception as a niche subject to core knowledge, as reinforced by ‘The Gold Guide’,1 ‘Broadening Your Horizons’ produced by the BMA,2 and ‘Tomorrow’s Doctors’ produced by the GMC,3 and the increasing presence on undergraduate and postgraduate medical curricula.

There is also humanitarian need for international research, as medical initiatives in developing countries are continually underfunded and underrepresented in clinical medicine and research programmes, and the greatest potential to improve life expectancy and quality lies there – for example, with neglected vaccination efforts for viral hepatitis B. However, there are certain risks and considerations to international collaboration and the influence from wealthy institutions. Research findings from a developed country may be costly or hard to implement in a developing country, may not be culturally appropriate, and often these focus on non-communicable diseases, prevalent in northern countries. Therefore, there can be a tendency to neglect the specific local needs of developing countries.

In 2002, the Nuffield Council on Bioethics published its report “The Ethics of Research Related to Health Care in Developing Countries”.4 This departs from the internationally accepted Declaration of Helsinki in that it states it may be morally acceptable to establish paradigms more applicable to the location of study, rather than developed world gold-standards.

However, such local parameters are often aspirational, rather than grounded in practicality, and open to interpretation given a lack of national standards, protocols
and algorithms, particularly where the realities of healthcare depart from ideal guidelines.

In this article we examine the advantages and pitfalls of such international work.

REFOCUSING RESEARCH RESOURCES

In moral terms, international collaboration should move research goals away from pure market forces and towards humanitarian aims. The greatest need for increasing quality and length of life lies in developing countries and cooperation may result in a marriage of a developed world’s research capacity with access to a developing country’s population and health needs, for mutual benefit.

First, this allows efforts to focus on debilitating diseases that can have great improvements in health factors from small investment, rather than those which simply provide good financial returns. Second, this provides commercial viability to research which might not otherwise be possible, where afflicted populations are generally impoverished and underserved by pharmaceutical interest. Third, with international funding, expertise and equipment, there is an increased scope in what the research itself may achieve, for example with genetics or metabolomics which require expensive equipment and specialist technicians, but where diseases are more prevalent in developing countries, concentration on these populations may lead to quicker recruitment of patients. Last, global research may better control for genetic, social and cultural bias present, than if examining just one population. Information from larger areas and a larger span of populations ensures a greater accuracy to the work itself. Multicentre research validating metabolomic and proteomic biomarkers in liver disease, across diverse populations is an example of just such a success story.6

Nonetheless, such distortion, even if intended to be philanthropic, can skew research outcomes to a developed country’s agenda. Developed countries institutions may lack insight into a developing partner country’s infrastructure, method of practice and make any gains inefficient, or even impossible to be implemented.

Examples of such healthcare inequalities, however well meaning, are seen with international HIV-AIDS work, owing to its relative funding, compared to other more under-resourced diseases. WHO and World Bank resources have been directed to provide heavily subsidised ($20 per annum) or free HIV treatment, but many of these drugs, such as tenofovir and lamivudine, are also active against hepatitis B, a condition that does not receive any subsidised funding. For example, in West Africa, where deaths from the complications of hepatitis B, such as hepatocellular carcinoma are very common, patients with hepatitis B monoinfection must pay for their own antiviral drugs. This is prohibitively expensive for the majority of people, and often not regularly feasible especially for more expensive, newer agents on patent, such as tenofovir, which can cost upwards of $8,000 per annum. However, if
an individual contracts HIV, then their drugs, including antivirals, such as tenofovir, are externally paid for by the Global Fund and become free at the point of care. In other words, such inequalities in funding have a market distortion in poorer African populations, contracting an HIV superinfection to viral hepatitis may improve their prognosis, given that HIV positivity allows access to definitive treatment for viral hepatitis too.

Similarly global partnership between the North and the South may also cause the transfer of resources away from governmental and market forces that encourage delivering healthcare, and into academically-driven research-directed goals that do not directly and immediately benefit the population of developing nations. This is particularly relevant when results are published in peer-reviewed journals, but the countries in which it may make the most impact may not have access to these journals, or speak the same language.

Ultimately, all research teams active in the global health arena should provide research questions that are either in line with developing countries’ national priorities, or they should be in a position to justify to external bodies the reasons why agendas do not comply with criteria set out in the Nuffield report. Conflict with different aims for research work may be avoided with transparency and good communication.

**INFRASTRUCTURE AND CAPACITY BUILDING**

Investment from external research bodies, including industrial partners, may allow the development of local capacity. Foreign investment can also stimulate demand for goods and services and therefore economic growth, even those not directly associated with the research work itself (for example local courier companies for sample transport) in line with Keynesian view of macroeconomics.

Material investment is important in increasing research structure and research potential (especially as countries with higher GNP per capita generally spend a larger percentage and absolute amount on medical research and development), but also critically, international research causes the dissemination of knowledge, incentivising up-to-date information and standardisation of clinical practice. This effect is pronounced with international global healthcare studies with work opportunities afforded as a result of the relationships developed. This can be beneficial, both for developing country staff when they return with expertise in clinical and research training, but also for developed country staff, given that access to populations in developing countries with increased disease prevalence allows research targets to be reached more quickly. THET is one such organisation that creates a frame-work for ‘health partnerships’ which are ostensibly mutually beneficial. Such collaborations not only nurture the dissemination of knowledge, but also can build on multicentre research aims and opportunities.

On the other hand, when international placements become feasible in research establishments in the North, there is a risk of causing a ‘brain drain’, where skilled
and talented labour is permanently exported, depriving the domestic healthcare system in developing countries. This has contributed to situations such as in Malawi where the doctor to population ratio is just 1.9 doctors to 100 000 population compared to the UK’s 2400. However the brain drain issue is contentious, despite its clear rationale as an argument, as staff may be viewed, as commodities, neither taking their wishes for self-determination into account, nor their quality of life.

Long term placements in developed world institutions also run the risk of over familiarizing healthcare professionals with alien healthcare systems that provide inappropriate experience. Many migrant workers, who come to developing countries for periods of research or clinical training, have skill sets that are appropriate for practice in their own countries, but all too often individuals find themselves ineffective and inexperienced in inappropriate surroundings, and such experience in the North may not improve their professional capacity if they return home, given that disease prevalence and treatment guidelines may differ. This may limit employment opportunities if domestic employers suspect returnees of being unfamiliar or with outdated knowledge of accepted methods of local clinical or research practice.

Medical expertise may also be retained in Europe, North America or Japan. For example, if biomedical samples are exported for analysis using expensive equipment in developed countries, there may be little incentive to train local people in analytical techniques. In an effort to develop division of labour, personnel from developing countries may be practicing uncomplicated tasks that hinder their opportunity to engage in novel research techniques available in their native institutions.

In addition, research may have political, economic or societal impacts beyond what was planned, especially where cultural and social beliefs are ignored and where healthcare aims are hijacked to developed countries’ agendas. Unfortunately, developed institutions often take advantage of developing countries in setting agendas and give them little or no credit in leading global health partnerships. Furthermore, if there is commercial value in the intellectual property then developed institutions can be exploited financially as well as intellectually.

Ultimately, it is often unlikely for many developing countries that the funding or infrastructure exists to develop capacity without timely economic development and long-term health structure investment. Although risks must be considered, it may provide unique effective methods to improve global quality of life.

PRODUCING HIGH CLASS RESEARCH

As explained above, true partnership in global health allows access to more diverse patient groups, with different ethnicity and health behaviours. Larger patient groups may enable enhanced patient recruitment, especially with rare diseases, and can
control for a larger variety of local factors with the potential to create higher powered research results.

Reputable high-ranking institutes may also lend credibility to research from developing countries that would otherwise be ignored as irrelevant or viewed with suspicion in peer-reviewed journals.

Although there is often a financial cost to international partnership with two-way visits and inspections, material and sample transport between sites, and adherence to ethical and/or clinical guidelines, relative costs, especially for labour are often lower. The cost of international collaboration depends on the research involved. Financial aspects become more problematic either when relationships crumble, sometimes leading to a significant loss of time and money, or when exchange rates fluctuate which can lead to unforeseen instability in budgetary planning.

Research across borders may also call for adherence to different guidelines, with multiple ethics committee approvals that increases red tape and make collaboration difficult. However, this is really only a small barrier to collaboration, rather than an argument against it.

There is often a perception that medical research in developing countries takes place in areas with less rigorous safety and ethical safeguarding to the detriment of patient, and where errors are permitted to occur more frequently. Although such a statement is so generalised as to sometimes be true, frequently perceptions that developing countries cannot carry out high class research may lead to more stringent guidelines and safeguards. This in turn can hinder an institution’s ability to carry out research. Furthermore, this is mostly avoided when many institutions carry out independent ethical review in the partnering developed country.

**SUMMARY**

International research can certainly be problematic, and will introduce foreseeable and unforeseeable difficulties. Such efforts tend to fall on a spectrum - few people would condone such work as AZT testing in Zimbabwe in the 1990s, but without international collaboration neither would we have the success stories of small pox or polio vaccination.

With rigorous planning, good ongoing communication and transparency, adherence to internationally-accepted ethical standards, and clear intended outcomes, common problems can often be avoided. The benefits gained by enhancing medical research and philanthropy are too extensive to be ignored, but do require extreme care and forethought, despite the fact that many implications from such international work can be extremely hard to predict.

References:


The authors declare that they have no competing interests

Authors’ Contribution Section:

JC undertook the background reading and production of the first draft of the article, NL and STR proof read and suggested alterations. All authors read and approved the final manuscript.