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The Leading Edge

Co-development, innovation and mutual learning – or how we need to turn the world upside down

Nigel Crisp [a,1]

[a] London School of Hygiene & Tropical Medicine, London, UK

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ABSTRACT

This paper describes the scope for mutual learning and the sharing of innovation between different parts of the world. It argues that the top-down concept of international development – with its connotations that low income countries need to develop in ways that emulate progress in richer more "developed" ones needs to be replaced with the idea of co-development and learning and sharing together. Similarly, it advocates for replacing the term of "reverse innovation" with the concept of global sourcing of innovation.

In 2006 Prime Minister Blair asked me how best the UK could use its experience and expertise to help improve health in developing countries. I had been Chief Executive of the largest health system in the world, the English NHS, and head of the UK Department of Health. I therefore came to the task with my own well-formed pre-conceptions about what needed doing. However, I quickly learned as I travelled in Africa and Asia that this mental baggage could get in the way of understanding how we could really help.

Africans and Asians, unsurprisingly, had their own ideas about what was needed. They told me how aid workers frequently arrived with solutions that did not work locally. These foreigners also often had different priorities from local people and from each other and failed to coordinate their efforts. Moreover, many aid programmes were focussed on single diseases such as HIV/AIDS or malaria-so-called "vertical programmes" – and could damage the country's general health services by drawing resources away.

These were not universal problems, and much of great value was and is done; however, they were significant enough in scale and impact to breed frustration and lead to wasted effort and missed opportunities. My first major conclusion in my report for the Prime Minister was therefore that we foreigners needed to stop telling people what to do and listen to what the local people knew needed to be done. It is an obvious statement but one that sadly still needs to be repeated today. As I wrote in my report: whilst we can all help, Africans will be the leaders in sorting out their own problems.[1]

We can all help, of course, but we need to shift our perspective and adopt a more open frame of mind. When I did so, I rapidly realised how much we can learn from people in low and middle income countries about health and health care as well as how much we can offer in return. People without our resources – or our baggage of history and vested interests – are using the assets they have at hand to achieve remarkable things. The resources of the community, people and materials, are pressed into service. Nurses are trained to do cataract surgery, family members support each other and community buildings are used for both health and non-health purposes.[2] We all, whether from richer or poorer countries, have things we can learn from each other and things we can teach.

1. Health and health care in low and middle income countries

This is not some romantic and patronising notion about low and middle income countries. Rather, it is a recognition that people working in some of the hardest health jobs in the world need to innovate and be resourceful if they are successfully to look after their patients and their people.

The difficulties they face are well illustrated by the 2006 World Health Report on health workers. It shows that the Americas, with around 12% of the world's population, had about 10% of the world's burden of disease and about 37% of the world's health workers, most of them in North America. Africa by contrast with a similar population had 24% of the burden of disease and just 3% of the world's health workers. The Americas account for more than 50% of total world expenditure on health whilst Africa spends only 1%.[3]

The difficulties in low and middle income countries are not just about resources. South Africa, for example, faces two of the most challenging tasks in the world: how to tackle HIV/AIDS when the country is at the centre of the epidemic; and how to introduce

[1] Independent Member of the House of Lords, Honorary Professor at the London School of Hygiene & Tropical Medicine.

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universal health coverage in a country with great inequalities as well as enormous need.[4]

2. Health and health care – our shared future

Richer and poorer countries, however, also share many common challenges three of which are described here. Firstly, there are the constant threats of infectious diseases which, as we have seen with Ebola, cause awful tragedies in their place of origin and create disruption around the world. More easily transmitted pathogens like SARS can spread at the speed of air travel unless rapidly contained locally. Disturbingly, some infections are now resistant to many drugs with, for example, extensively drug-resistant tuberculosis (TB) now present in 77 countries[5] and methicillin-resistant *Staphylococcus aureus* (MRSA) widespread around the world. Epidemics and anti-microbial resistance can only be tackled by shared action globally[6]. These epidemics generally develop in remote regions with little health surveillance. All countries are therefore as vulnerable as the weakest one and all share a vital self-interest in promoting health protection and surveillance measures globally.

Secondly, as the Global Burden of Disease study showed, the world is facing an epidemic of non-communicable diseases – heart and respiratory diseases, cancers and diabetes amongst them.[7] These are no longer diseases purely of richer countries. Diabetes, for example, is increasing faster in Sub Saharan Africa than anywhere else and is a major problem in South Asia. Health systems in the richer industrialised countries are good at treating these diseases and their complications, but they are generally poor at managing them as long term chronic diseases or in preventing them. New more community based service models are needed with more emphasis on prevention. Interestingly, these richer countries have more difficulty in developing new approaches because they have major investments in hospitals and vested interests concerned with maintaining the status quo. Poorer countries, however, don't have “legacy” systems to dismantle and are often better able to call on community resources to help with the task.

Thirdly, costs are rising-thanks to a number of factors including technology and rising demand from aging populations[8] – and there is increased global competition for skilled health workers.[9] The resulting resource constraints make it difficult both for countries trying to maintain existing health systems and for those attempting to introduce universal health coverage.

3. Learning from low and middle income countries

These three examples demonstrate both our global interdependence and the need for new thinking and new approaches. I argue in *Turning the World Upside Down* that, as shown in Table 1, there are different ideas coming from low and middle income countries which complement insights from the industrialised countries.

Table 1
A different set of ideas that can complement western scientific medicine.[10]

- Social enterprises use business methods to achieve social ends.
- Empowering people means helping them become economically independent as well as having rights and a voice.
- Health is dealt with as part of people's lives and not as something completely separate.
- Health workers are trained to meet local needs and not just for the profession.
- Public health and clinical medicine are brought together.
- Best use is made of the resources to hand.

A few examples illustrate the points. Firstly, Aravindh from Southern India uses business methods to achieve social gains. It is a values-driven organisation set up by a surgeon in 1976 to treat the millions of people who need eye surgery. It achieves very high standards of quality at very low cost by using standardized processes, supporting each surgeon with many assistants and developing new processes and materials when it needs to. Its business model is very simple: patients who can pay do, others don't. Both get the same quality of treatment. By 2012 it had treated 32 million patients and performed 4 million surgeries[11]. Other very impressive Indian organisations such as Wellspring and Naryana Hospital Group similarly offer high quality low cost treatments in maternal and cardiac care respectively.

BRAC in Bangladesh is a good example of the second and third ideas in Table 1. Set up in 1972 shortly after independence, its aim is to support the ultra-poor. It focuses on women, running empowerment classes in villages, providing health services, and offering micro-finance loans to enable them to set up small enterprises. In recent years it has opened shops to sell its clients' produce – as well as schools and a university: breaking down the barriers between health, education and economic activity.[12]

BRAC ran a campaign to teach women how to re-hydrate their children after diarrhoea which has been so successful that child deaths fell dramatically and Bangladesh has easily exceeded its Millennium Development Goal of reducing under 5 deaths by two-thirds between 1990 and 2015.[13] It achieved this result through empowering women and developing a nationwide network and was supported by the International Centre for Diarrhoeal Disease Research in Bangladesh (ICDDRB), which developed the oral rehydration therapy now used worldwide for diarrhoea and cholera.[14] Other treatments with global impact have originated in low and middle income countries, such as DOTS therapy for TB developed in Uganda; whilst much of our knowledge about the best ways to manage HIV/AIDS comes from Africa. Moreover, entrepreneurs in these countries are using new technologies and developing eHealth and mHealth. Mobile phones are now used for money transfer in Kenya, tackling drug counterfeiting in Ghana – where bar codes are read and sent for checking to a central location-and remote consultations throughout the globe.

Similarly low cost but highly effective policy solutions have come from these countries including conditional cash transfers – the policy whereby social security benefits are conditional on recipients undertaking beneficial actions such as getting children immunised – which was researched and initiated in Brazil and Mexico in the 1990s

Community action is another common theme. Examples include Mothers2Mothers in southern Africa: where mothers with HIV support pregnant women with HIV to help them to follow the regimes they need to ensure that they do not pass it on to their child.[15] Mental health provides many such examples including SUNDAR in India which combines community support with training for lay workers and some low cost therapies.[16]

Perhaps the most radical developments – to western eyes at least – are where new roles have been developed and where nurses regularly perform tasks undertaken by doctors in richer countries and mid-level and community health workers play very important roles. There are, of course, examples of this “skill mix change”, “task shifting” or “task sharing” occurring in the US and Europe and Fig. 1 shows the spread of some of these schemes around the world.

Successful examples have improved access to services and quality and reduced costs. Access was improved, for example, by orthopaedic clinical officers in Malawi, trained by an orthopaedic surgeon, seeing 153,000 patients and performing 33.000 bone manipulations and 37,000 minor operations each year. In Ethiopia, 35,000 village-based Health Extension Workers carry out a range