

Infectious disease governance – a globalised yet divided world

Author: Anna Holzscheiter | June 22, 2010

It was about a month after ‘patient zero’, 5-year old Edgar Hernandez from Mexico, was registered as the first official case of so called ‘swine flu’ that the WHO raised its pandemic warning level to 5, that is one level below a full-scale global pandemic. Last year’s outbreak of the global influenza A pandemic (H1N1) with a predicted historical death toll once again proved that in our globalised world viruses cross borders in no time. It exhibited the difficulties of governments to effectively control sudden outbreaks of highly infectious diseases at a time where the mobility of people is higher than ever.

The swine flu pandemic also once again highlighted the wide gap that exists between developing and developed countries in terms of their ability to provide the drugs, health services, logistics and wider medical infrastructure necessary for the rapid protection of citizens from communicable diseases. While industrialised countries were able to develop and acquire large quantities of vaccinations, particularly for most at risk populations, the health systems and health budgets of many developing countries would not be able to shoulder the burden of disease of such a pandemic, facing large numbers of deaths.

The World Health Organisation (WHO) has sought to redress this imbalance by securing about 200 million dosages of the vaccine for developing countries – however, considering that the United States alone have purchased 250 million dosages, the WHO stockpile seems a drop in the ocean, which can barely have an impact on the containment of H1N1 influenza. Since the H1N1 outbreaks have, so far, remained rather mild, developing countries’ restricted access to vaccines has not yet provoked political tensions, but it might in the future (Enserink, 2009).

Poorest countries are hardest hit

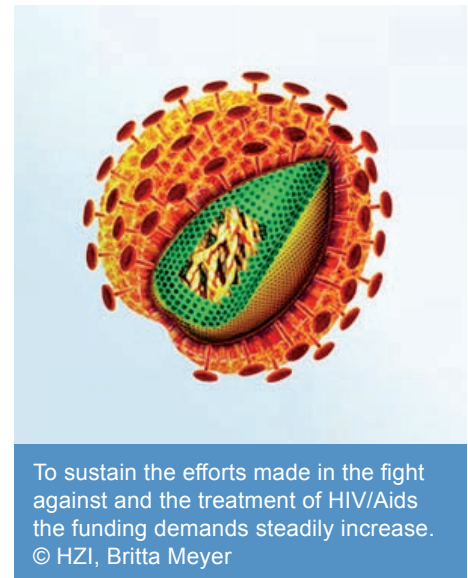
The swine flu pandemic is just the latest example among many for how developing countries’ health systems are particularly hard hit by the burden of communicable diseases – half of all deaths in sub-Saharan Africa are related to infectious diseases.^[1] Of the 9.5 million people worldwide who die from communicable diseases every year, almost all live in developing countries.^[2] In September this year, heads of governments will convene in order to discuss the progress that they have made with regard to achieving the Millennium Development Goals (MDGs) by 2015. Three of these eight MDGs explicitly relate to health (4, 5 and 6), and MDG 6 addresses infectious diseases that have a particularly destabilising effect on the poorest regions of the world, such as HIV/AIDS, Malaria, Tuberculosis. Even though



UN reports on MDG 6 show that some progress has been made in terms of controlling the spread of these diseases, the results achieved so far are sobering.^[3] By the end of 2007, only 3 million of the estimated 9.7 million HIV-infected people in need for antiretroviral treatment (ARVs) were actually receiving the life-saving drugs.^[4]

HIV/AIDS, in particular, has seen a massive global effort to provide the necessary funding for rolling out anti-retroviral treatment to millions of people, strengthening health systems, and developing and implementing tools and campaigns for prevention. However, precisely since so many treatment programmes have been put in place which have raised the life expectancy of millions of HIV-infected people, the funding needed to make these efforts sustainable in the long run steadily increases. Several countries in sub-Saharan Africa still have a HIV prevalence rate of over 20 per cent (Botswana, Lesotho and Swaziland).^[5] UNAIDS estimates that in 2008, around 13.7 billion USD were spent on responding to HIV and AIDS and it projects that 25.1 billion USD will be needed in 2010 for the AIDS response in low and middle-income countries alone.^[6]

UNAIDS also reckons that domestic governments will only be able to provide one third of these estimated funds – which means that alternative sources of funding (global initiatives, bilateral development agencies, private donors etc.) will have to account for the other two thirds.^[7] Considering that many developing countries, particularly in Southern Africa and Asia, are not only struggling to control HIV infection rates, but are also particularly affected by other tropical infectious diseases such as Malaria, Tuberculosis, Chagas disease, sleeping sickness or Schistosomiasis, their health systems are extremely dependent on external funding sources



^[1] UC Atlas of Global Inequality, Cause of Death, <http://ucatlas.ucsc.edu/cause.php>, accessed 13/06/10.

^[2] WHO (2008), Global Burden of Disease: 2004 Update, available at: http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html, accessed 13/06/10

^[3] United Nations, MDG 6 ‘Combat HIV/AIDS, Malaria and other diseases’, <http://www.un.org/millenniumgoals/aids.shtml>, accessed 13/06/10

^[4] United Nations (2008), MDG Report 2008, available at, http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2008/MDG_Report_2008_En.pdf#page=31, page 30, accessed 13/06/10

^[5] UNAIDS (2008), 2008 Report on the Global AIDS Pandemic, available at: http://data.unaids.org/pub/GlobalReport/2008/JC1511_GR08_ExecutiveSummary_en.pdf, accessed 13/06/10.

^[6] UNAIDS (2009), What Countries Need. Investments needed for 2010 targets, available at: http://data.unaids.org/pub/Report/2009/JC1681_what_countries_need_en.pdf, accessed 13/06/10.

^[7] UNAIDS (2009), What Countries Need. Investments needed for 2010 targets, available at: http://data.unaids.org/pub/Report/2009/JC1681_what_countries_need_en.pdf, accessed 13/06/10.

Funding priorities don't match burden of disease

In 1990, the Commission on Health Research for Development started issuing its regular reporting on annual spending for research and development (R&D) in the health field, confirming the infamous '10:90' gap in this field, where only 10 per cent of the global budget are invested in health issues that predominantly affect low- and middle-income countries.^[8] These countries, however, shoulder 90 per cent of the burden of preventable mortality. Recent studies on global funding patterns for infectious diseases show that global funding priorities for infectious diseases do not necessarily correspond with the relative burden of these diseases.

Shiffman's studies on global priorities for infectious disease control, for example, demonstrate that acute respiratory infections account for one fourth of the burden of disease in developing countries but have received only 2 per cent of global aid for health between 1996 and 2003. HIV/AIDS, by contrast, consumes 46 per cent of the global funding for health while being responsible for 'only' 31 per cent of the burden of disease in the developing world (Shiffman, 2006: page 415, see also Shiffman, 2008). The WHO Global Burden of Disease list of the ten most deadly diseases in developing countries also concludes that lower respiratory infections are the leading cause of death in developing countries (11.2 per cent of all deaths), followed by diarrhoeal diseases (6.9 per cent), HIV/AIDS (5.7 per cent), Tuberculosis (3.5 per cent) and Malaria (3.3 per cent).^[9]

The preferences of the global health community – sometimes called the H 8 (WHO, UNICEF, UNFPA, UNAIDS, GFATM, GAVI, Bill and Melinda Gates Foundation and World Bank) – not only prioritise some infectious diseases over others, they also sideline the health of specific population groups such as children and mothers. And even though, both in the developing and the developed world, the burden of disease and mortality is shifting from communicable to non-communicable diseases such as strokes, diabetes or heart diseases, the former continue to enjoy a high priority on the global agenda (Burke and Matlin, 2008: 62). Particularly those infectious diseases that lend themselves to seemingly 'easy' solutions such as insecticide-treated mosquito nets against the spread of malaria or vaccinations seem to be more popular among global health initiatives which often privilege quick success stories over longer term, more costly and complex improvements in health systems. This is often portrayed as a preference for vertical (i.e. disease-specific) versus horizontal (health system in general) health policies.



Women in the village of Golo Sodoma, Ethiopia receive free bed nets in a UNICEF distribution campaign.
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^[8] Now Council on Health Research for Development, <http://www.cohred.org/about-us>, accessed 13/06/10.

^[9] WHO, 'The top ten causes of death', <http://www.who.int/mediacentre/factsheets/fs310/en/index.html>, accessed 13/06/08.

Sleeping sickness and the economy

In general, it appears that the pharmaceutical industry sector is increasingly dominated by only a handful of multinational corporations (MNCs). The logic of such a market is to focus on pharmaceutical products that promise a very high return. As a consequence, the typical sales threshold that determines if a product qualifies for research and development is around 500.000 million USD (Moran, et al., 2005). It is no surprise that such a market dynamic has led to a scaling down of research into infectious diseases, particularly those that have a smaller burden of disease or are endemic to the poorer regions of the world.

Among the large number of neglected tropical infectious diseases, sleeping sickness (or Human African Trypanosomiasis (HAT)), a vector-borne disease which is endemic to Africa and results in approximately 40.000 deaths per year, exhibits what economists call a ‘market failure’ in the global economy for health. Pharmaceutical companies have, so far, been more than reluctant to develop drugs which can only be advertised in the poorest regions of the world where there are no prospects for ‘emerging markets’^[10]. Eflornithine, an expensive treatment against sleeping sickness, is too costly and complicated to be administered in low-capacity settings – treatment for an adult in the later stage of the disease at present costs around 200 USD.^[11] The same active agent, though, is marketed as an expensive lifestyle drug in industrialised countries where it works against facial hair in women.

Recently, however, sleeping sickness has seen a successful intervention by one of the numerous public-private-partnerships that seek to work against such market failures by developing and providing medication and health services that would otherwise not be available and affordable in developing countries’ public health systems – the Drugs for Neglected Diseases Initiative (DNDi). The DNDi has developed a new and easy-to-administer drug combination against sleeping sickness and, through WHO, donated large quantities of that medication to countries affected by the disease. The partnership is seeking to bring together public agencies such as WHO, civil society organisations like *Médecins sans Frontières*, research institutes and private companies that work together in order to provide cost-effective health interventions for neglected diseases in developing countries.^[12]

^[10] TropIKA.net, ‘Sleeping sickness: could a new drug be in prospect?’, www.tropika.net/svc/research/Chinnock20100416-Research-Trypanosomiasis-Dundee, accessed 13/06/10.

^[11] DFID/R4D (Research for Development), ‘Sleeping sickness: waking up to reality?’ <http://www.research4development.info/caseStudies.asp?ArticleID=189>, accessed 13/06/10.

^[12] DNDi homepage, <http://www.dndi.org>, accessed 13/06/10.

^[13] Roll Back Malaria Initiative, Press release, 17/04/2009, <http://www.rollbackmalaria.org/docs/press/prRBM2009-04-17.pdf>, accessed 13/06/10.

^[14] William J. Clinton Foundation, ‘Pediatric Program’, <http://www.clintonfoundation.org/what-we-do/clinton-health-access-initiative/our-approach/major-programs/pediatric-program>, accessed 13/06/10.

Since prices for drugs for many of the most common infectious diseases remain constantly high compared to developing countries' health budgets, various such public-private partnerships have emerged in the past 10 years, resulting at times in significant price reductions for these drugs. In 2009, a new partnership including 30 public and private agencies was set up in order to make artesim-in-combination therapies (ACT) against Malaria – killing more than 2.000 children each day – widely available. The partnership has pledged 225 million USD in order to lower prices for ACTs.^[13]

Public-private partnerships boost drug development

Other such partnerships and philanthropic organisations are increasingly targeting entire populations that seem to be marginalised in current global and national health priorities. The Clinton Foundation, for example, has contributed much to the increasing visibility of children in health policies that target communicable diseases such as HIV and is working for the development of special drug formulas and testing kits for children that are, at the same time, affordable. The Foundation's Pediatric Program has succeeded in lowering prices for pediatric anti-retroviral drugs by 60 per cent and sponsored the development of the first easily dispensable child-friendly tablet.^[14]

In terms of research and development of drugs for neglected diseases, a joint project by the London School of Economics and the British Wellcome Trust concluded in 2005 that public-private partnerships have greatly boosted drug development for neglected diseases. (Moran, et al., 2005) In fact, PPPs were responsible for 47 of the 63 ongoing active neglected disease R&D projects in 2004. Interestingly, the project reports that the new public-private collaborative programmes seem to slowly reverse the trend among the largest global pharmaceutical companies to cut down on R&D for neglected tropical diseases – making R&D in this sector an integral part of their strategies of social responsibility and ethical corporate image.



Prices for drugs for many of the most common infectious diseases remain constantly high compared to developing countries' health budgets
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^[14] William J. Clinton Foundation, 'Pediatric Program', <http://www.clintonfoundation.org/what-we-do/clinton-health-access-initiative/our-approach/major-programs/pediatric-program>, accessed 13/06/10.

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