

Health Risks

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Adopting a human security perspective, this paper argues that health is essential for development, and that health risks are increasingly globalised. The author divides global health risks into three major categories. 'Traditional' poverty-related diseases, such as malnutrition and diarrhoea, still cause widespread illness and death in developing countries. Women and children are particularly vulnerable to these diseases, many of which can be easily prevented or treated. Non-communicable diseases cause sixty per cent of deaths globally, and are a growing threat in many developing countries. Emergent highly infectious diseases, such as HIV and AIDS, multi-drug-resistant tuberculosis, and avian flu form the third category. Based on case studies, the author develops a framework for change. She argues that political commitment and leadership is key to securing health. Functioning health systems are needed to translate commitment into action, while civil society participation supports government accountability. Improved commitments and better governance at global level are essential for national-level improvements.

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1. Introduction - Health Risks from a 'Human Security' Perspective

At the heart of human security is protecting human life. Sustaining and enhancing health and well being therefore is instrumental to achieving human security.

Health can be defined as:

'...not just the absence of disease, but as "a state of complete physical, mental and social well-being"'.
Human Security Now.¹

Any factors that threaten health security, that is, threaten the survival or the safety of daily life; imperil the natural dignity of men and women; expose people to the uncertainty of disease; or subject vulnerable people to sudden deprivation caused by economic downturn, constitutes a breach of human security.

The human security perspective is built on the notion that people are the most active participants in determining their well-being.² A healthy individual can take responsibility for his/her own livelihood; is capable of being economically productive; and is able to contribute to the society in which they live, supporting peers and taking part in civil actions to protect themselves and their community.

At a higher level, this engenders community integrity, social stability and economic growth. Sudden epidemic outbreaks or other health crises can, and do, destabilise entire societies and economies.

In today's world, borders cannot withstand globalisation. No country or community is impervious to the threats of global disease, whether it is communicable or non-communicable, a developed nation risk or a poverty-related threat. For example, the Severe Acute Respiratory Syndrome (SARS) epidemic of 1993 emerged from the Guandong Province of China. Within five months, despite stringent containment strategies, it had spread via humans to 30 countries, infecting over 8,000 people and killing over 800.

The strong multiplier-effects of globalisation can be positive. Child immunisation protects not just that child, but also others in the neighbourhood. Control of infectious epidemics like SARS means that protecting individuals also protects nations. (*See SARS case study*) These global interdependencies in health are being recognised. Human security cannot be left to the state. It is a global responsibility, both collectively and individually.

This paper first considers what constitutes a health risk before defining three major health challenges to human security. It then uses a 'human security approach' to determine how these health risks can be mitigated to achieve human security.

2. What Constitutes a 'Health Risk'?

Four factors should be considered before declaring a health risk:

1. The scale of the disease burden, now and projected into the future.
2. The urgency for action: the rate of transmission, the degree of control and the rate at which control can be asserted.
3. The depth and extent of its impact on society: the extent to which the fabric of the social structure is affected, as well the economic impact.

¹ Commission on Human Security (2003) 'Human Security Now' Communications Development Incorporated, Washington DC, <http://www.humansecurity-chs.org/finalreport/English/FinalReport.pdf>, accessed: August 2006

² Commission on Human Security (2003) 'Human Security Now' Communications Development Incorporated, Washington DC, <http://www.humansecurity-chs.org/finalreport/English/FinalReport.pdf>, accessed: August 2006

4. The degree of interdependencies that will transcend people and places: the threat and rate of cross-border transmission, and beyond this, the impact on interdependent societies and economies.

3. Three Major Health Risks

The health risks that pose a serious threat to the human security of this planet can be categorised into *three* groups. First, 'traditional' poverty-related threats cause the greatest burden. Secondly, non-communicable diseases such as cancer, coronary heart disease, strokes and diabetes were considered to be a greater threat in the developed world, as opposed to the developing world. But as HIV and AIDS was left unrecognised and largely ignored for long enough for it to get a foothold (which, 25 years later, it has not yet relinquished), so non-communicable diseases are the sleeping monsters of the twenty-first century in the developing world. Thirdly, 'new' infectious diseases, such as SARS, could be a catastrophic threat to human survival. Increasingly, these diseases are animal-borne, transmitted across species to humans and are highly contagious. Very little is known about them – either about their composition, the way in which they cross over into humans or how to treat them. This, coupled with globalisation, means that the potential for them to wreak transnational havoc, leaving humanitarian and economic disaster in their wake, is extremely high.

'Traditional' poverty-related threats

The global share of avoidable deaths is disproportionately high in poor countries. Poor people are more susceptible to environmental health threats such as water-borne infections like diarrhoea caused by the lack of clean drinking water and sanitation, and asthma and respiratory infections caused by air pollution. These are compounded by hunger and malnutrition. Deaths caused by these infectious diseases, avoidable with basic treatment, constitute a major breach of human security.

The leading causes of childhood mortality are acute respiratory infections and diarrhoeal disease. Pneumonia poses the most serious threat in children, even though it can be treated with affordable antibiotics. Diarrhoea is caused by ingesting bacteria spread through water, food, hands, eating and drinking utensils, flies, and dirt under fingernails. It can easily be prevented by having clean water, and as illustrated in the case study on Egypt (p. 15), adopting healthy behaviour and treating it extremely cost-effectively with Oral Rehydration Therapy. Malnutrition often accompanies these leading causes of childhood death.

Women and children are especially vulnerable. In developed countries in 2000, 13 mothers died per 100,000 live births due to complications during pregnancy or during childbirth. In sub-Saharan Africa, this figure escalates to 940 mothers dying per 100,000 live births.³ Many of these deaths could be avoided if there was better access to basic maternal health care. (See case study on Honduras, p. 16). The risk of children becoming orphans is heightened, as they are 3.9 times more likely to die in the two years following their mother's death.⁴

Poor people are least able to absorb the effects of ill-health. When a family member becomes ill, the combined effect of a loss in earnings as well as the spiralling costs of health care can be devastating. In addition to this funeral, expenses can average a third of an annual wage.⁵ Children often suffer as fewer resources are available for their care. Food, education and basic needs are often sacrificed.

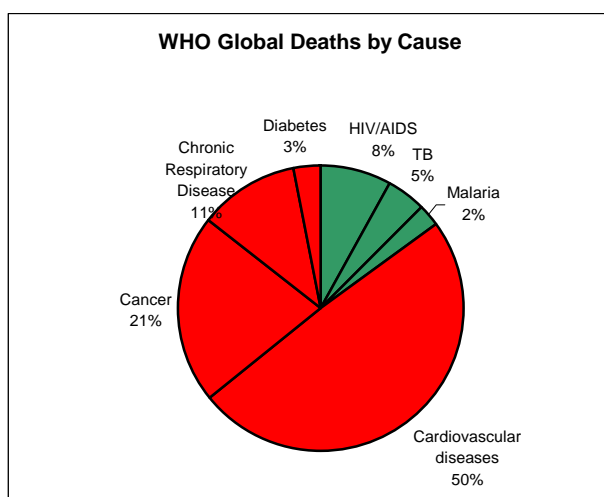
³ UNICEF Statistics, End-decade Database (2006) 'Maternal Mortality', <http://www.childinfo.org/areas/maternalmortality/countrydata.php>, accessed August 2006

⁴ UNICEF (2006) 'Africa's Orphaned and Vulnerable Generations; Children affected by AIDS', UICEF, UNAIDS and PEPFAR, http://www.unicef.org/publications/index_35314.html, accessed October 2006

⁵ UNICEF (2006) 'Africa's Orphaned and Vulnerable Generations; Children affected by AIDS', UICEF, UNAIDS and PEPFAR, http://www.unicef.org/publications/index_35314.html, accessed October 2006

Non-communicable diseases – a human security threat in developing countries

According to the World Health Organisation,⁶ 60 per cent of all deaths are due to chronic (non-communicable) disease. This is more than double the number of deaths from *all* infectious diseases including HIV and AIDS, tuberculosis, malaria, maternal and perinatal conditions and nutritional deficiencies combined. Of these, 80 per cent occur in low or middle-income countries, in men and women equally. In absolute terms, this translated into 28 million deaths in 2005. In comparison, 2.8 million people died due to AIDS in 2005.



Source: 'Preventing Chronic Diseases', WHO (2005)

The WHO has predicted 338 million deaths from chronic diseases in the next 10 years, with 310 million taking place in poor countries. (There have been 40 million AIDS deaths in the last 25 years.) This will have grave economic consequences. It is estimated that China will forego \$558 billion in National Income in the next ten years. The Russian Federation will face a 5.5 per cent decrease in GDP.

An enormous hurdle in the fight against the devastating impact of chronic disease is the unappreciated cause of poverty. Poor people are more likely to have an unhealthy diet, be physically inactive and smoke more. Exacerbating this is their increased exposure to the risk of maternal deprivation, increased risk of unhealthy behaviour, unhealthy living conditions and limited access to good quality healthcare. They are more likely to suffer the double burden of poverty and disease arising from the high cost of treatment and the loss of income.

Tobacco use is the leading cause of preventable deaths in adults and therefore one of the biggest security threats to the world's health. If current trends hold, it could kill 1 billion people this century, 10 times more than in the 20th century.⁷ It contributes to half of all cancer deaths,⁸ lung cancer being one of the most common diseases caused by smoking. It is also the major cause of cardiovascular disease including strokes and heart attacks. A study in India showed that it accounts for about half the country's tuberculosis deaths and could be increasing the spread of infection.⁹ Passive smoking impairs the ability of children to breathe normally, and around pregnant women can contribute to sudden infant death syndrome and babies being born with a below normal birth weight. Further,

⁶ World Health Organisation (2005) 'Preventing Chronic Diseases: a vital investment', World Health Organisation, Switzerland: Geneva

⁷ CNN (2006) 'Tobacco could kill 1 billion this century if current trends hold', <http://www.cnn.com/2006/HEALTH/07/10/tobacco.cancer.ap/index.html>

⁸ Peto, R.A., J. Lopez, M. Boreham et al (1992) 'Mortality from Tobacco in Developed Countries: Indirect Estimates from National Vital Statistics', *The Lancet*, 339: 1268-78

⁹ Gajalakshmi, C.K., P. Jha, K. Ranson, and S.Nguyen, (2000) 'Global Patterns of Smoking and Smoking Attributable to Mortality Patterns', in *Tobacco Control in Developing Countries*, ed. P. Jha and F.J. Chaloupka. Oxford: Oxford University Press

smoking often claims the life of its victims in their prime, thereby robbing countries of labour and placing a strain on the health system.¹⁰

The socio-economic transition that developing countries are experiencing is playing a major role in the rising incidence of chronic disease, including diabetes. The culture of working longer hours and depending on 'take-away' food is pervasive, especially for poor people. Lower paid jobs result in people working longer hours. Traditional nutritious food is replaced with convenient and cheap take-away food, high in fat, sugar and salt. Watching television, an increasingly popular pastime in developing countries, represents a dual threat. Not only does it replace physical activity, especially for children, but food advertising also contributes to changes in diet. Consequently, obesity is increasing in adults and children in middle-income countries such as India and China, and also in poor countries like Tanzania. In poorer countries, associated diseases such as diabetes tend to be diagnosed later. People have less access to treatment and therefore suffer more acute complications than their counterparts in richer countries. As diabetes is a lifelong condition, the cost of medicines can drive patients into a downward spiral of debt and poverty.¹¹

'New' Infectious Diseases

A new class of infectious disease has emerged. It has the potential to pose the gravest threat to human security yet. These new diseases are animal-borne and are transmitted to human beings. They are highly infectious and in some cases can have a fatality rate of up to 90 per cent. Very little is known about them, their process of transmission, their genetic make-up and hence their curative treatment.

Avian influenza

Avian flu or 'bird flu' as it is more commonly known, was the latest of this class of disease to threaten the world. It emerged in South-East Asia in 2003 and was transmitted from birds to humans. It travelled rapidly to ten countries. To date 261 cases have been reported with 157 deaths,¹² although there was the potential for it to be much worse. Based on the 1918 pandemic, statistical analyses have projected a death count of 62 million if this pandemic was to return. 96 per cent of deaths are forecast to be in the developing world.¹³

Mad cow disease

These diseases cause fear and also huge economic turmoil. Mad cow disease (Variant Creutzfeldt Jakob Disease) caused the UK beef and cattle market, worth £720 million/year, to collapse, following a ban on British beef. The total cost to the UK taxpayer was approximately £288 million in the ten years up to 1996.¹⁴

SARS

Severe acute respiratory syndrome (SARS), a pandemic declared as an emergency in March 1993, was contained thanks to quick and effective global collaboration (see SARS case study). From Guangdong province in China, the virus travelled in humans to 30 countries and areas of the world. In less than five months, over 8,000 people were infected and over 800 died.¹⁵ The economic impact in Asia was devastating, having been compared to the economic crisis of 1988.¹⁶ The government of Singapore

¹⁰ Centre for Global Development (2004) 'Millions Saved: Proven Successes in Global Health', http://www.cgdev.org/section/initiatives/_active/millionssaved, accessed August 2006

¹¹ Kamal Smith, M. (2003) 'Why developing countries need access', *Diabetes Voice*, 48:2

¹² World Health Organisation (2006) 'Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO', http://www.who.int/csr/disease/avian_influenza/country/cases_table_2006_12_27/en/index.html, accessed January 2007

¹³ Murray, C.J.L., A. D. Lopez, B. Chin, D. Feehan, K.H. Hill (2006) 'Estimation of potential global pandemic influenza mortality on the basis of vital registry data from the 1918–20 pandemic: a quantitative analysis.', *Lancet*, 368: 2211-2218.

¹⁴ Ministry of Agriculture, Fisheries and Food (2000) 'The BSE Inquiry:

The Inquiry into BSE and variant CJD in the United Kingdom', <http://www.bseinqury.gov.uk/index.htm>, accessed January 2007

¹⁵ World Health Organisation (2003) 'SARS Outbreak Contained Worldwide' Press Release WHO/56, 5th July 2003

¹⁶ PBS (2006) 'SARS and China Trade' Nightly Business Report, http://www.pbs.org/nbr/site/research/educators/060106_16a/

introduced a \$130 million aid package for its tourist industry. There were severe concerns for Malaysia's tourist industry, which normally contributes 20 per cent to the nation's GDP.

The effect was felt globally. European buyers of Asian fabrics suffered because travel restrictions limited their ability to 'touch and see' the products they were purchasing. World ports were cautious about accepting deliveries causing delays that resulted in huge financial loss. Even the fishing industry as far away as Auckland suffered as boats supplied the suffering restaurants in Hong Kong and China.

The lives of 700 million rural agricultural workers were devastated as the disease went unreported and was spreading. Not only were their lives threatened, they were stripped of their livelihoods as tourism crashed, resulting in decline in demand for their products. As ever, the most vulnerable are the main victims of such massive human security violations.

Marburg fever and Ebola fever

Other fatal diseases in this class include Marburg haemorrhagic fever¹⁷ and Ebola haemorrhagic fever¹⁸ transmitted through contact with primates or their tissue. The actual animal host remains a mystery. Both viruses are from the same family and are highly infectious. The last known outbreak of Marburg fever was in Angola in October 2004. By 2 April, 163 cases had been reported, 150 of which were fatal. Ebola virus has a fatality rate of between 50-90 per cent of infected cases. The source seems to be in the rainforests of the African continent and in the Western Pacific. All cases of Ebola have been in the African sub-continent, although Marburg occurred simultaneously in laboratories in Germany and Serbia. In the first cases, the African green monkey had been imported for research and to prepare polio vaccines.

HIV and AIDS

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) are perhaps the most well-known of this class of infectious disease. The first cases were discovered in 1981 in the United States, the Democratic Republic of Congo and in East Africa. By 1985, cases were reported in every region of the world. The World Health Organisation declared it a national security threat in 2000. In 25 years, it has spread to virtually every country in the world, infecting 65 million people and killing 25 million. In 2005, there were 38.6 million people living with HIV and AIDS: 4.1 million were newly infected, 2.8 million lost their lives to AIDS¹⁹ and there were more than 15 million orphans due to HIV and AIDS²⁰. One per cent of the global population is infected with HIV. Sub-Saharan Africa remains the global epicentre. Of the 2.3 million children living with HIV and AIDS globally, 2 million are in this region as well as 76 per cent of all women.²¹ By the end of 2005, of the 6.5 million people needing life-saving anti-retroviral treatment (ARV) for HIV, 1.3 million were receiving it.

Tuberculosis (TB)

TB constitutes a major threat to global human security, particularly in Africa where HIV and TB form a lethal combination. Each accelerates the progress of the other. TB is rapidly increasing in Africa.

¹⁷ World Health Organisation (2005) 'Marburg haemorrhagic fever – fact sheet', World Health Organisation, <http://www.who.int/csr/disease/marburg/factsheet/en/print.html>
Centre for Disease Control 'Marburg Hemorrhagic Fever', <http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/marburg/qa.htm>, accessed August 2006

¹⁸ World Health Organisation 'Ebola Haemorrhagic Fever', <http://www.who.int/mediacentre/factsheets/fs103/en/print.html>

¹⁹ UNAIDS (2006) 'Global Facts and Figures', http://www.who.int/hiv/mediacentre/200605-FS_globalfactsfigures_en.pdf, accessed January 2007

²⁰ UNAIDS (2006) 'Report on the Global AIDS Epidemic', http://www.who.int/hiv/mediacentre/2006_GR_ANN2_en.pdf, accessed January 2007

²¹ UNAIDS (2006) 'Report on the Global AIDS Epidemic', http://www.who.int/hiv/mediacentre/2006_GR_ANN2_en.pdf, accessed January 2007

It is the leading killer of people living with HIV and AIDS.²² A quarter of a million TB deaths are HIV associated; 98 per cent of TB deaths are in the developing world, affecting mostly young adults in their most productive years. It is also a leading killer of young women, particularly in Africa. A quarter of all cases is in Africa; half of all new cases are in 6 Asian countries – Bangladesh, China, India, Indonesia, Pakistan, Philippines). TB is a curable disease, and yet it kills 5,000 people every day. In this trend, it will kill 35 million people within 20 years.

There was no cure until 50 years ago. Now the world faces strains that are drug-resistant in every country surveyed by the World Health Organisation. More worryingly, strains that are resistant to all major anti-TB drugs have recently emerged – multi-drug resistant TB (MDR-TB). MDR-TB is present in virtually all 109 countries recently surveyed by the WHO, with the highest rates in the former USSR and China. Drug-resistant TB is treatable with extensive chemotherapy, which is prohibitively expensive (100 times more expensive than the drugs to treat drug susceptible TB), and also more toxic.

In 2006, the WHO launched the ‘Stop TB’ strategy, to be implemented over the next 10 years. It is comprehensive and includes increasing access to high-quality health services, addressing the challenge of MDR-TB, engaging care providers, empowering communities and people with TB, and promoting research. It is set to achieve the Millennium Development Goal (MDG) to stop and reverse the incidence of TB by 2015.

4. A Human Security Approach to Facing Health Risks

The Human Security approach embodies a two-pronged strategy: *protection* and *empowerment*. The protectionist component seeks to protect people through preventing, treating, monitoring and anticipating health threats. The empowerment component involves fostering an environment to increase the capacity of individuals and communities to assume responsibility for their own health by using a multi-sectoral and multinational approach.

The Table 1 below illustrates strategies that support each of the two components.

| | Empowerment | Protection |
|-----------------------------------|--|---|
| <u>Knowledge-based strategies</u> | <u>Education</u> <ul style="list-style-type: none"> • Universal basic education, especially for women • Tailored curricula • Education on health behaviours, including seeking health services • Civil-society participation in democratic decision-making to protect the health of themselves and their communities through deciding appropriate programs | <u>Knowledge/Information Systems</u> <ul style="list-style-type: none"> • Generation, analysis and dissemination of epidemiological data to anticipate, monitor and respond to the risk of infectious disease, including openly accessible global and national surveillance systems • Shared access to knowledge on medical technology and advancement, including vaccines, drugs and diagnostic equipment • Intellectual Property Rights – trade rules that enable universal access to affordable medicines |
| <u>Social Strategies</u> | <ul style="list-style-type: none"> • Local Health Groups to educate communities, offer peer support and lead social mobilisation | <ul style="list-style-type: none"> • Health policies, planned and implemented through civil-society partnerships; that foster community actions; that empower them to participate in the decision-making process; that change behaviours and attitudes; and enable solutions to health problems, at least with prevention. |

²² World Health Organisation ‘Tuberculosis’, WHO media centre, <http://www.who.int/mediacentre/factsheets/fs104/en/print.html>

| | | |
|--|---|---|
| | | <ul style="list-style-type: none"> • Health systems with adequate numbers of health workers; free and accessible basic health care services; community health care and community health insurance to mitigate economic catastrophe |
| <u>Information Media</u> | <ul style="list-style-type: none"> • To educate and engage the public, increase awareness and engender positive changes in health behaviour through coverage of health issues and debates; and advertisements with special health messages | <ul style="list-style-type: none"> • Sensitise the media and use it as a platform for public health messages to promote healthy behaviours and change attitudes |
| <u>Political leadership</u> | | <ul style="list-style-type: none"> • Political commitment to the health aspect of the social contract between elected Governments and citizens |
| <u>Global Responsibility for Health Security</u> | | <ul style="list-style-type: none"> • Global responsibility for health and human security, including <ul style="list-style-type: none"> ○ public financing for global health, increased foreign assistance for health, ○ increased mobilisation of international media and non-government organisations to raise awareness of health issues ○ increased commitment of political leaders at the global level to prioritise health issues. e.g. G8 leaders, European Union and African Union ○ increased support for multi-lateral institutions such as the Global Fund to Fight AIDS, Tuberculosis and Malaria; and UN agencies including the World Health Organisation |
| <u>Global Health Governance</u> | | <ul style="list-style-type: none"> • Multi-national institutions to form new and enhance existing global collaborative network platforms to support and co-ordinate national initiatives for surveillance and response to health threats • Establish ground rules for health security <ul style="list-style-type: none"> ○ Modernise national health rules and regulations (Should include transnational health risks such as environmental threats, tobacco control and criminal violence) ○ Rules for trade and food safety |

Table 1. Empowerment and Protection Strategies

5. Drivers of change for ensuring Health Security

Some countries have enjoyed successes in combating health security violations. Analysis of a few case studies (see case studies) has led to the framework below. Although each country did not necessarily display all the components of the framework, aspects that were exemplified were key drivers of

change. It could be argued that each had a distinguishing feature that enabled change to happen. For example, Brazil is famous for its openness on sexual matters, Egypt was on the cusp of a television phenomenon, which allowed a targeted media campaign to be an extremely powerful tool, and Poland was upward bound after communism. However, without supporting drivers to translate the potential of these differentiating features, successful change would not have been possible. The function of each driver is discussed below.

A Framework for Change

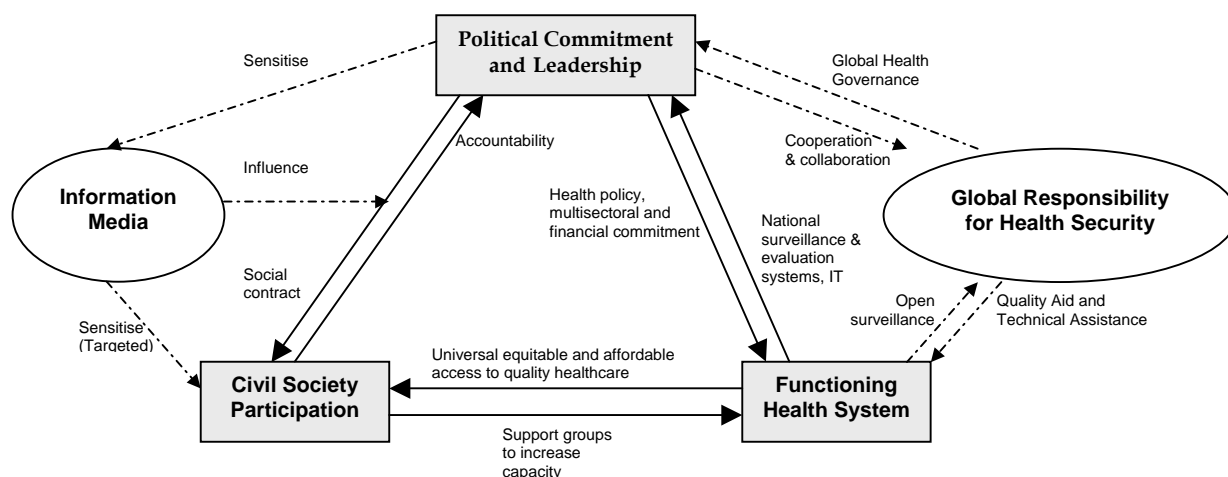


Figure 1. Framework of Drivers of Change

The above framework is based on three cornerstones that are the main drivers of change; the two other elements, Information Media and Global Responsibility for Health Security are tools to help achieve change. It is based on strategies for protection and empowerment. (see Table 1.) The case studies used to illustrate successful change contain elements shown in the framework that were critical to their achievement.

Protection

Political recognition and commitment to the social contract between the government and civil society is essential for achieving change. It is expressed in practical action through, for example, a functioning health system. This includes financial and multi-sectoral commitment to progressive health policy, and good quality health care delivery to its citizens. National evaluation and surveillance systems within the health system allow for feedback that enhances the decision-making process and ensures that policies and projects have the desired effect. The capacity of the national government to deliver quality health care can be supported globally through global health governance, such as national and international health regulations that protect health security, technical assistance and quality aid. The national government must contribute to global health security by allowing shared access to its surveillance systems, and supporting global collaborative networks that respond to health threats.

Empowerment

Civil society should hold the government accountable for their health security, through the social contract. People can only be active participants in determining their own well-being if they are empowered to do so. They must be sensitised to health issues and be empowered to protect the health of themselves and their communities. The information media is key in this process. The government should sensitise the media to health issues and use it as a platform to sensitise the public and educate them in healthy behaviours, including seeking health services. In turn, an empowered civil society can form organised networks of civil groups who can lobby the government for solutions to their health

problems. They can also increase the capacity of weak health systems by forming health groups to educate, offer peer support and assist health workers.

6. Achieving Change - Lessons from Past Success

Political Commitment

Political commitment and leadership is a key factor in all the case studies that achieved change. The ongoing political commitment the Brazilian government has made to its citizens is exemplary (see case study 1, pp. 13-14). It has resulted in free, universal access to AIDS medicines; AIDS deaths and related HIV and AIDS infectious diseases have been cut by 50 per cent.

A huge barrier to curbing the ravaging destruction of the AIDS pandemic is the high cost of AIDS drugs, caused by patents held by pharmaceutical companies. Patents prevent the generic manufacture and export of drugs, keeping prices of life-saving treatment artificially high. However, Brazil's commitment to its citizen's right to health was such that it led the way in the global arena in achieving 'compulsory licensing'. This exception rule in patent law allows countries to break drug patents in order to fight a deadly public health crisis. Brazil passed legislation permitting the manufacture of generic drugs and now produces eight out of seventeen of its AIDS medicines, accounting for an 82 per cent reduction in cost. Brazil continues to relentlessly negotiate lower prices with the pharmaceutical industry, threatening to break patents by issuing compulsory licenses. Thailand has recently also shown a commitment to its citizens' health over the patents of drug companies by also issuing a compulsory licence for an AIDS drug.²³ The government has authorised the manufacture of generic versions of the drug until 2011, and the import of generics from India until domestic manufacture comes into line. This will lead to a fall in the price of drugs, making them more accessible to millions of people.

The biggest barrier in the fight against HIV and AIDS is the stigma and discrimination associated with it. Political delusion surrounding the disease is detrimental to combating it. For example, South Africa's President Thabo Mbeki questioned the safety and value of life saving anti-retroviral treatment for HIV and AIDS before ultimately questioning whether HIV causes AIDS. This had a deleterious effect on AIDS treatment and prevention efforts in South Africa.²⁴

Conversely, Botswana's President Festus Mogae has spoken publicly about the threat. He was frustrated by the effect that stigma had on people being tested for HIV and said, '*We are threatened with extinction. People are dying in chillingly high numbers. It is a crisis of the first magnitude*'.²⁵ Botswana was the first African country to aim to provide ARVs to all its citizens that required it.²⁶

The importance of political leadership cannot be overemphasised.

A Functioning Health System

In order to translate commitment into action, the government must ensure a functioning health system, based on enabling health policy. The Brazilian government set up a dedicated AIDS division. A national commission was formed with multi-sectoral participation, including non-government organisations, universities, researchers, intellectuals and social specialists. It recognised the difficulties people living with HIV and AIDS face, both socially and economically. As such, anti-discriminatory

²³ International Centre for Trade & Sustainable Development (2006) 'Thailand Issues Compulsory License for Patented AIDS Drug', *Bridges Weekly Trade News Digest*, 10:42, <http://www.ictsd.org/weekly/06-12-13/story2.htm>, accessed January 2007

²⁴ Chaisson, R. (2000) 'The World AIDS Conference in Durban, South Africa – Science, Politics and Health', *The Hopkins HIV Report*, September 2000, John Hopkins AIDS Service, http://www.hopkins-aids.edu/publications/report/sept00_1.html#top, accessed January 2007

²⁵ Farley F. "At AIDS Disaster's Epicenter, Botswana Is a Model of Action; During U.N. conference, leader speaks of national 'extinction,' but country plans continent's most ambitious programs", *Los Angeles Times*, 27 June 2001

²⁶ Avert 'HIV AND AIDS in Botswana', <http://www.avert.org/aidsbotswana.htm>, accessed January 2007

laws were passed to protect its citizens from stigma and discrimination – the biggest barrier people living with HIV and AIDS experience. Multi-sectoral involvement has meant that HIV and AIDS patients are entitled to free bus passes to make certain they are able to keep medical appointments. Co-operative agreements with political opposition have served to safeguard laws and budgets, providing continuity of the AIDS program. Egypt set up the ‘National Control of Diarrhoeal Disease Project’ (see case study 2, p. 15). The programme was multi-sectoral, involving the private and public sectors as well as professional societies. In decreasing maternal mortality rates in Honduras, the government awarded maternal health priority in its national health policy (see case study 3, p. 16).

In both Brazil and Egypt, the programmes were delivered through the existing, albeit weak, health system. A huge barrier the world is currently facing is an acute shortage of health workers to deliver health care. In Honduras, Traditional Birth Attendants (TBA’s) supervised by auxiliary nurses and public health staff increased the capacity of the system to augment access to skilled care for pregnant women. The basic health infrastructure was expanded with new birthing centres in rural areas.

Significantly, Brazil and Egypt had control systems built into their programmes. It is critical that AIDS patients strictly adhere to their drug regimen. The Brazilian national control system is able to track each case of AIDS in the country, with the capacity to monitor and update a patient’s drug regime at any antiviral centre in the country. It also allows rigorous control over the supply and distribution of drugs. An extensive tracking system in Egypt allowed progress on goals to be monitored. Data was continually fed back into the decision-making loop that ensured the programme was continually updated and adapted for the desired impact.

Global Responsibility for Health Security

Rampant infectious diseases are emerging to threaten the world’s health security. Global collaboration and cooperation is required to combat them. Unprecedented global collaboration has already been witnessed in the fight against ‘Severe Acute Respiratory Syndrome’ (SARS) (see case study 5, p. 18). The World Health Organisation (WHO) co-ordinated the collaboration, working with international partners to support national teams. Initially, international and national teams on the ground provided information on the disease, which allowed the development of case definitions as well as specific and detailed measures for surveillance. This information was quickly disseminated globally, allowing quick identification of imported cases and thus the containment of SARS. Countries not affected cooperated by accepting requests from the WHO to immediately report any new cases detected. Epidemiologists around the world worked together in real time using global connectivity to collaborate on control measures. Clinicians came together globally to understand best how to treat the disease effectively and find a cure. Seventeen laboratories from nine countries also came together in a unique collaboration. Operational teams provided 24-hour advice to countries on SARS surveillance, preparedness and response measures. International teams worked with national authorities on case management, infection control, and surveillance and epidemiology. By the beginning of July 2003, and just four months later based on country surveillance reports, the human transmission of SARS appeared to have been broken everywhere in the world.

The global responsibility for health security goes beyond the agreement of improving open surveillance. There needs to be a real drive to build country capacity to combat these rapid and destructive pandemics.

Quality aid and technical assistance is imperative for countries to be able to run life-saving programmes. Global support for Egypt’s ‘National Control of Diarrhoeal Disease Project’ was essential for its success; from the total cost of \$43 million for the project, half came from USAID. UNICEF donated \$827,000 in raw materials for the manufacture of the rehydration salts and the WHO contributed \$452,000 in training programmes and materials; \$17 million in cash and in-kind came from the Egyptian government. In a separate but groundbreaking case, the UK’s Department for International Development is making a major contribution to funding a strategy to strengthen the

health system in Malawi.²⁷ It is a long-term commitment, which, in part, is addressing core reasons for the human resource crisis in the country.

Global leaders must increase their commitment to health security; there has been some success. At the G8 summit in Gleneagles, global leaders committed themselves to achieving almost universal access to anti-retroviral drugs for HIV and AIDS by 2010. However, health security must be accorded higher priority overall in the global political arena. Increasing the capacity of countries to deal with health threats requires more funding whether in the form of public financing for global health or increased foreign assistance. There should be support for multilateral institutions such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFFATM) (see case study 6) and UN agencies such as the WHO. The GFFATM has been hailed by the Executive Director of UNAIDS as, '...the best model to provide strategic and predictable funding'.²⁸

Increased commitment to health security must also translate into better global health governance. International and national ground rules for global health security must be modernised and established. These should include transnational health risks such as environmental threats, tobacco control and criminal violence. It is vital that trade rules recognise the exceptionality of global health security and ensure that life-saving essential drugs are made universally available at affordable process. The security of our world is at stake. The success of tobacco control measures is a reminder of what can be accomplished. Despite the fact that arriving at the 'Framework Convention on Tobacco Control' was a slow and arduous process, fraught with legal battles and long negotiations over text, the end product is a powerful instrument in enforcing a rigorous, internationally supported approach to improving health. Ultimately, rich multi-national corporations lost out to civil society lobbying for health security (see case study 4, p. 17).

Information Media

The media is instrumental in achieving change. Once sensitised to health issues, the media can provide a unique platform to sensitise, educate and change the behaviour of the public. It is also fundamental in getting the voice of the people heard.

The fall of communism in Poland allowed a free media to emerge (see case study 4). The press reported on studies carried out by the Polish scientific community on the devastating impact of smoking. This dramatically increased awareness and served to form public opinion on tobacco control legislation. The media also published advertisements with special health messages and steps on how to quit smoking. Civil society lobbied hard for tobacco control measures. In 1991, tobacco control legislation was proposed in the Polish senate. Rich, giant tobacco multinationals, fiercely opposed this, to no avail. The debates of the opposing lobbies were covered by the media. In 1995, the Polish parliament passed the 'Law for the Protection of Public Health Against the Effects of Tobacco Use', with a 90 per cent majority of the votes.

Social marketing and mass media campaigns have been described as the most pivotal aspect of the success of the Egyptian National Control of Diarrhoeal Disease Project. Based on research on consumer preferences and cultural practices, communication strategies changed behaviour and increased awareness of Oral Rehydration Therapy (ORT), an inexpensive and effective treatment for diarrhoeal disease. Media campaigning was targeted towards mothers of children under the age of three, pharmacists and health workers. Television adverts used popular soap stars that people could relate to and employed a maternal love theme. This strategy empowered women by bringing ORT

²⁷ Department for International Development (2004) 'Improving Health in Malawi: Programme Memorandum', London: DFID, <http://www.u4.no/themes/health/dfidmalawifinalreport.pdf>

²⁸ United Nations (2006) 'Global Fund on AIDS, TB and Malaria Receives \$500 million from Gates Foundation', UNNews@un.org, New York, Aug 9 2006

into the home in a manner that engaged them. After the first national campaign, 90 per cent of mothers knew of ORT and its use increased by 60 per cent.

In Brazil, the media was instrumental in getting the voice of the people heard in 1999 when the budget for HIV and AIDS, TB and other diseases came under threat. Six hundred NGO's working on AIDS demonstrated and were covered in the press; the budget was restored. Empowering civil society created a vocal lobby not just to fight HIV and AIDS, but for better healthcare in general.

Civil Society Participation

An educated and empowered civil society can be an active participant in determining people's own health and hold governments accountable for their health security. They can form organised networks of civil groups who can hold the government to account and lobby it for solutions to their health problems. Further, they can increase the capacity of weak health systems by forming health groups to educate, offer peer support and assist health workers.

In Brazil, an empowered and well-organised network of civil society groups has been critical to the success of the HIV program. Organised civil groups of gay activists were the first to raise awareness of HIV and AIDS issues. Other civil society groups were essential in building support for the programme and increasing the capacity of the health system by designing programmes and making them work. For example, activist groups were crucial in the prevention strategy by distributing millions of free condoms. Networks of patient support groups are run in HIV and AIDS clinics by people living with HIV and AIDS.

In Egypt, local health groups increased the capacity of the health system by acting as 'depot holders'. They stored rehydration salts in their homes and then distributed them to villagers in rural areas for a small price or free. They were also trained in Oral Rehydration Therapy.

In Honduras, new decentralisation policies enabled and encouraged civil society participation in the decision-making process. Communities were provided with the opportunity to identify, and also provide, solutions to their own health problems.

In Poland, civil-society lobbying enabled groundbreaking tobacco legislation to be put into place.

Recently, African civil groups successfully lobbied leaders at the Africa Union Summit in Abuja in 2006. They petitioned leaders to commit themselves to meeting the 80 percent target of HIV and AIDS treatment needs and 100 per cent of the prevention needs of all Africans by 2010. The targets formed the core of Africa's common position to the UN General Assembly Special Session on AIDS in June 2006. Progress on achieving these targets can be monitored and leaders held accountable.

7. Conclusion

Past successes show that global health security is possible. They show that in order to accomplish this, political leaders must make it a priority in the global arena, make a commitment to the social contract, and ensure that civil society is empowered so that people can be the most active participants in determining their own well-being.

Case Study 1: Brazil – Free, Universal Access to AIDS Medicines

Brazil's foresight has mitigated the human security threat of HIV and AIDS for its citizens through simultaneous programmes of prevention and treatment. AIDS deaths and related HIV and AIDS infectious diseases have been cut by 50 per cent²⁹ Today, of the one million people who have

²⁹ Rosenberg, T. 'Look at Brazil', The New York Times Magazine, <http://www.nytimes.com/library/magazine/home/20010128mag-aids.html>, accessed: 17th Aug 2006

access to life-saving anti-retroviral treatment globally, 30 per cent are in Latin America and 10 per cent are in Brazil.³⁰

The key driver of change in Brazil is the on-going political commitment to its citizens' right to health and hence to fighting the AIDS epidemic. Its strategies are based on both protecting and empowering its citizens.

Protection through committed leadership

In 1996, President Jose Sarney passed legislation guaranteeing every AIDS patient state-of-the-art AIDS treatment, free of charge. Non-discriminatory laws were also passed to protect citizens living with HIV and AIDS against the biggest problem they encounter – stigma and discrimination.

Free AIDS Treatment

A huge barrier against free, universal access to ARV drugs is their high cost, kept artificially high because of the patent rights to medicines that pharmaceutical companies hold. Millions of people's health security is compromised because life-saving drugs are kept out of reach. The Brazilians led the way in the global arena at the World Trade Organisation Ministerial meeting in Doha, Qatar, in achieving 'compulsory licensing'. This exception rule in patent law allows countries to break drug patents in order to fight a deadly public health crisis. Brazil passed legislation permitting the manufacture of generic drugs and now produces eight out of seventeen of its AIDS medicines, accounting for an 82 per cent reduction in cost. Brazil continues to relentlessly negotiate lower prices with pharmaceutical companies, threatening to break patents by issuing compulsory licenses.

Dedicated AIDS division

Political commitment to combating HIV and AIDS was illustrated in the formation of a separate government AIDS division in 1986.³¹ Following this, a national commission was formed with multi-sectoral ministerial participation, as well as non-government organisations, universities, researchers, intellectuals and social specialists.

Co-operative agreements

Co-operative agreements with political opposition have served to safeguard laws and budgets, providing continuity of the programme, despite changes in governments.

National control system³²

To ensure on-going protection through comprehensive service coverage and effective treatment of people living with HIV and AIDS, an AIDS clinic network was added to the existing, fragile, public health system. A computerised national control system, known by its Portuguese acronym SICLOM, makes it possible for health officials to closely track each case of AIDS in the country. A bar-coded card kept by the patient is used to access the patient's medical notes and history. The drug regime for each case can be monitored and updated in any of the 111 antiviral treatment centres throughout the country. Apart from the knowledge base that the system provides to monitor and evaluate the program, it also enables rigorous control over the supply and distribution of drugs.

Sustained and varied support

The need to help, train and support patients on anti-retroviral treatment to take their medicines correctly is intuitive but not always forthcoming. A survey of more than 1,000 people in Sao Paulo found that the most important factors in people discontinuing their treatment were: (i) missing a doctor's appointment; (ii) level of instruction and support available at the clinic; and (iii) the patient's income and education.³³

³⁰ Lotrowska, M. (2006) 'Brazilian deal on tenofovir – translation of MoH release of 9th of May' [Ip-health], <http://lists.essential.org/pipermail/ip-health/2006-May/009546.html>, accessed 17th August 2006

³¹ Quesada, C. 'The fruits of foresight', IDBAmerica: magazine of the inter-American Development Bank, <http://www.iadb.org/idbamerica/English/FEB02E/feb02e1.html>, accessed 17th Aug 2006

³² Quesada, C. 'Leadership, consensus and technology', IDBAmerica: magazine of the inter-American Development Bank, <http://www.iadb.org/idbamerica/English/FEB02E/feb02e5.html>, accessed 17th Aug 2006

³³ Rosenberg, T. 'Look at Brazil', The New York Times Magazine, <http://www.nytimes.com/library/magazine/home/20010128mag-aids.html>, accessed: 17th Aug 2006

In Brazil, health workers spend a large part of their day supporting their patients and their training has been extended. Multi-sectoral involvement has meant that AIDS patients are entitled to free bus passes. Churches and Lions Clubs donate food and baby formula. Networks of patient support groups are run in clinics.

Strong and Effective Civil Society Participation through Empowerment

An enabling environment

A sensitised and empowered civil society can hold the government accountable for the health security of the nation. However, a culture open to being sensitised is essential to achieving civil society participation and activism, which can ultimately achieve health security gains.

A key element in Brazil's success is that it is famously open about sexual matters. AIDS carries less stigma than in other countries, where its existence is simply denied. This enabling culture was pivotal in increasing the visibility of HIV and AIDS issues. Organised civil groups of gay activists were the *first to raise awareness and found a powerful ally in President Jose Sarney*.

Empowerment through the Media

Empowerment strategies were put into place simultaneously with the protection strategies. The government increased the media's awareness of the issues surrounding HIV and AIDS, including the technical and human aspects of the disease and its treatment. The media was then used as a platform to sensitise, educate and inform the Brazilian public about AIDS. What followed amounted to a true media blitz on all television stations, radio networks and print media outlets. Culturally attuned public service commercials were aired promoting safe sex and increased awareness of the epidemic.³⁴

The media was instrumental in getting the voice of the people heard when in 1999, the HIV and AIDS, TB and other diseases budget came under threat. Six hundred NGOs working on AIDS demonstrated and were covered in the press. The money was restored. Empowering civil society created a vocal lobby not just to fight HIV and AIDS, but for better healthcare in general.

Empowerment through networked civil groups

An empowered and well-organised network of civil-society groups has been critical to Brazil's success. They were essential in building support for the programme and increasing the capacity of the health system by designing and making the programme work. For example, activist groups were crucial to the prevention strategy, distributing millions of free condoms. They were also instrumental in getting the issue onto the political agenda and were the key to sustaining the health budget through vocal lobbying. The support groups they form are vital in ensuring a positive environment for people living with HIV and AIDS.

Case Study 2: Preventing Diarrhoeal Deaths in Egypt³⁵

In 1977, at least half of the large number of infant deaths in Egypt was caused by diarrhoea. It amounted to a serious public health security violation. Through the 1980s, Egypt pioneered a 10-year national programme of Oral Rehydration Therapy (ORT) administration, an effective and inexpensive treatment for diarrhoea. By the mid-1980s, and at the peak of the program, there had been a fourfold increase in the distribution of oral rehydration salts. Virtually all mothers were aware of the treatment, and had the knowledge to administer it. Infant mortality declined by 36 per cent and child mortality by 43 per cent between 1982 and 1987. Mortality attributed to diarrhoea fell by 82 per cent in infants and 62 per cent in children over the same period.

Protection Strategies

The Ministry of Health set up the National Control of Diarrhoeal Disease Project in 1981. Its aim was to promote the use of locally manufactured rehydration salts, distributing the salts along with information of

³⁴ Cohn, J. (2003) 'Sexual Healing', The New Republic. <http://www.cptech.org/ip/health/c/brazil/newrepublic06302003.html>, accessed 17th Aug 2006

³⁵ Centre for Global Development (2004) 'Millions Saved: Proven Successes in Global Health', http://www.cgdev.org/section/initiatives/_active/millionssaved, accessed August 2006

the appropriate treatment for children. It was essential that the salts were locally manufactured to ensure uninterrupted supply of the salts – this was vital to the programme's success.

The programme was multi-sectoral and involved both the public and private sectors and also professional societies. It worked through the existing health infrastructure in order to strengthen the capacity of service delivery units to produce, promote and explain ORT. It had an extensive tracking system that was used to forecast and monitor progress on goals. An evaluation component tracked the progress of the interventions, their effects and the impact on mortality. Data was continuously fed back into the decision-making process. This data analysis allowed the programme to be adapted frequently.

It was imperative to change the behaviour of the two most important groups that would be administering ORT – health workers and mothers. Health workers were trained on how to accurately diagnose and treat diarrhoea and dehydration. They were also trained to teach mothers how to use ORT. Physicians were trained in the scientific basis of ORT to break the ingrained culture of prescribing diarrhoeal drugs. Medical and nursing schools were also persuaded to include ORT in their curricula.

Global support for the programme was critical. Of the total cost of \$43 million, half came from USAID and \$17 million in cash and in-kind came from the Egyptian government. UNICEF donated \$827,000 in raw materials for the manufacture of the rehydration salts and the WHO contributed \$452,000 in training programmes and materials.

Empowerment through knowledge

The social marketing and mass media campaigns have been described as the most pivotal aspect of the programme. Based on research on consumer preferences and cultural practices, communication strategies changed behaviour and increased awareness.

In this case, the government sensitising strategy was two-pronged: training offered through the health infrastructure coupled with media campaigning. Media campaigning was targeted towards mothers of children under the age of three, pharmacists and health workers. Television adverts used popular soap stars that people could relate to and employed a theme of maternal love. This strategy empowered women by bringing ORT into the home in a manner that engaged them. Uniquely, the television phenomenon had just started in Egypt. Families would congregate around neighbours or friend's television sets in the evening to watch soaps. As the adverts were aired at this time, all of society was engaged in the media campaigns to raise awareness, particularly poorer audiences who would not have had access to print media. This high media penetration was very powerful. After the first national campaign, 90 per cent of mothers knew of ORT and its use increased by 60 per cent.

Civil Society Participation

Local health groups strengthened the capacity of the health infrastructure. In remote rural areas where the death rate from diarrhoea was twice that in the urban centres, long distances between homes and health centres inhibited the distribution of rehydration salts. Community leaders, traditional birth attendants and health workers were recruited as 'depot-holders'. They would hold the rehydration salt packets in their homes and distribute them to villagers for either a small price of about 2 cents or for free. They were also trained in the use of ORT.

Case Study 3: Reducing Maternal Mortality in the Poorest Areas of Honduras³⁶

In Honduras in 1990, 182 out of every 100,000 women died in or as a result of childbirth³⁷. The national government was made aware of this serious threat to the security of pregnant women and mothers through a study in the early 1990's. Together with development agencies, the government made a concerted effort to tackle the issue. By 1997, the maternal mortality rate had decreased by 38 per cent – an achievement widely recognised as remarkable.

The government's strategy, in tackling the issue, neatly combined a strategy of both protectionism and empowerment.

³⁶ Centre for Global Development (2004) 'Millions Saved: Proven Successes in Global Health', http://www.cgdev.org/section/initiatives/_active/millionssaved, accessed August 2006.

Protectionist strategies

Protectionist strategy was implied in the new priority maternal health. It included increasing equitable access to skilled care for pregnant women, targeted by geographical differentials; increasing the number of health workers by introducing traditional birth attendants (TBA's) supervised by auxiliary nurses; and expansion of the basic health infrastructure, with new birthing centres in rural areas. TBA's and public health staff were trained to recognise and deal with emergencies as well as routine births.

Empowerment strategies

New decentralisation policies enabled and encouraged civil participation in the decision-making process. Communities were provided with the opportunity to identify as well as provide solutions to their own health problems. Resources from donors were channelled in to support this process.

Between 1990 and 1997 the maternal mortality rate in Honduras declined from 182 deaths per 100,000 live births to 108 deaths per 100,000 live births. Some of the biggest declines were in the poorest and most remote areas in the country.

Case Study 4: Cutting Smoking in Poland – a civil triumph³⁸

In the 1980's Poland had the highest rate of smoking in the world; this translated into Polish middle-aged men suffering from one of the highest rates of lung cancer in the world. However, the rise of a free media after the fall of communism and the unanimous voice of a democratic and empowered civil society, led to groundbreaking tobacco control legislation. Between 1990 and 1998 tobacco consumption fell by 10 per cent. Lung cancer in middle-aged men fell by 30 per cent; there was a 7 per cent decrease in heart disease and a decrease in babies born with a low birth-weight. There were 10,000 fewer deaths per year.

An Empowered Civil Society

At a time when tobacco consumption was escalating, the Polish scientific community illustrated the devastating impact smoking has on health. In response to this, and in the wake of the fall of communism, Poland's budding civil society rallied for tobacco control measures. Later, when non-government organisations were allowed to form, civil-society had an even stronger voice.

In the new democratic era, the free-media was central to the success of the civil-movement in increasing awareness of the dangers of smoking and obtaining tobacco control measures. Covering health issues, the press reported on the studies illustrating the health consequences of smoking. This dramatically increased awareness and served to form public opinion on tobacco control legislation. The media also published advertisements with special health messages as well as steps on how to quit smoking.

In 1991, tobacco control legislation was proposed to the Polish senate. Rich, giant tobacco multi-nationals, fiercely opposed this, to no avail. The debates of the opposing lobbies were covered by the media. In 1995, the Polish parliament passed the 'Law for the Protection of Public Health Against the Effects of Tobacco Use', with a 90 per cent majority of the votes.

The groundbreaking legislation included a ban on electronic media advertising, the printing of health warnings on cigarette packets and the free provision of treatment for smoking dependence. The tobacco control legislation served as a model for other countries, as well as for the European Union in 2003.

Case Study 5: SARS – unprecedented global collaboration³⁹

The World Health Organisation's Global Alert Response system is a surveillance system that continually tracks the outbreak of emerging potential health epidemics around the world. SARS was one such threat identified on the 12 March 2003.

³⁷ This case study is about Honduras in the 1990s. No progress has been made since to advance towards reaching the MDG. In 2000, the maternal mortality rate *increased* to 119 per 100,000 live births, and for the years 2001 and 2006 (no official figures available for other years) stood at 108, for both years.

³⁸ Centre for Global Development (2004) 'Millions Saved: Proven Successes in Global Health', http://www.cgdev.org/section/initiatives/_active/millionssaved, accessed August 2006

³⁹ World Health Organisation (2003) 'The Operational Response to SARS', WHO http://www.who.int/csr/sars/goarn2003_4_16/en/print.html

Unprecedented global collaboration was the key to the containment of this deadly disease. Initially, international and national teams on the ground provided information of the disease, which allowed the development of case definitions as well as specific and detailed measures for surveillance. This information was quickly disseminated globally, allowing quick identification of imported cases and thus the containment of SARS. Other information sources, including NGOs, the media, other UN agencies and partners in the Global Outbreak Alert Network (GOARN) were used to identify new cases. The WHO received daily updates on the situation in countries with outbreaks. They also requested the immediate reporting of cases detected in all other countries. Operational teams provided 24-hour advice to countries on SARS surveillance, preparedness and response measures.

The WHO worked with partners in the Global Outbreak Alert Network to support international teams. Teams consisted of 60 experts representing 20 organisations and 15 nationalities working with national authorities on case management; infection control; surveillance and epidemiology. Teams were brought together on a daily basis via telephone or videoconferences for progress updates, to share experience and to plan further action. Epidemiologists around the world worked together in real time using global connectivity to collaborate on control measures. Clinicians came together globally to understand how to treat the disease effectively and find a cure. Seventeen laboratories from nine countries also came together in a unique collaboration with the support of the WHO.

As a direct result of this global collaboration, the cause of SARS was identified so inroads could be made into its isolation and treatment. By the beginning of July 2003 and just four months later, based on country surveillance reports, the human transmission of SARS appeared to have been broken everywhere in the world.

Case Study 6: The Global Fund to Fight AIDS Tuberculosis and Malaria (GFFATM)

The GFFATM was proposed by the former Secretary-General of the UN, Kofi Annan in 2001. It is a unique international public/private collaboration dedicated to attracting and disbursing funds to fight the three diseases. It aims to do this through strengthening health systems and paying for drugs, diagnostics and other commodities.

With grants from the GFFATM, 132 countries have begun to exhibit substantial results. Now, 544,000 people have access to life-saving anti-retroviral HIV and AIDS drugs; more than 1.4 million people are being treated for TB and more than 11 million bed nets have been distributed to protect children from malaria.⁴⁰

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⁴⁰ United Nations (2006) 'Global Fund on AIDS, TB and Malaria Receives \$500 million from Gates Foundation', UNNews@un.org, New York, Aug 9 2006

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