

MODELING AND EMPLOYING THE HUMAN SECURITY APPROACH
A HEALTH SECURITY PERSPECTIVE ON THE CURRENT
INTERNATIONAL RESPONSE TO THE HIV EPIDEMIC

Master of Arts in Law and Diplomacy Thesis
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April 2005

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A special thanks to Professor Adil Najam
for his guidance and support.

Abstract

Like all neologisms, human security carries a lot of hope. Particularly in the sector of health, human security has introduced a new urgency, a greater political will and a sense of connectivity between the houses of 'haves' and 'have-nots'. The impact of global infectious diseases, violence and diseases related to poverty threaten the gains of development in low and middle income countries. What should a human security approach to health issues, particularly HIV, entail? Drawing on work by Sabina Alkire (2002), this paper asserts that human security interventions should be based on three principles: *the focus on the individual as the nexus of analysis, the use of equity as the process, and the pursuit of institutionalized, responsive and preventive solutions*. The importance and utility of these codes are elucidated by means of application to the concept of 'health security'. It is argued that a greater emphasis on social determinants of health, a higher rate of civil registration to ensure inclusion of vulnerable groups and a primary care approach to health delivery embody the spirit of health security. The validity of these arguments is tested by relating their relevance to the current international response to the HIV epidemic. This paper then concludes with some policy recommendations and emphasizes the central role of good governance in all human security programming.

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I. Introduction

*"Do we not always find the diseases of the populace traceable to defects in society?"
-Rudolf Virchow (1821-1902)¹*

The linkages between health and human security are not new. At the individual level, diseases have always been a source of insecurity to the quality of life and livelihoods. At the community level, issues of health access are tied to marginalization, revealing the connection between individual security and good health. No where are these dynamics more clear than in the case of the HIV epidemic. HIV has infected almost 60 million human beings worldwide and claimed over 20 million lives, with 3 million in 2003 alone.² Over 95% of the disease burden of HIV/AIDS resides in developing countries.³ This pandemic depletes capacity and assets at the individual and the state, leaving both vulnerable to other hazards.

To date, the human security perspective has been in useful in defining the problem. It has helped illustrate the influence of risk and vulnerabilities in determining health status. It has, however, lacked operational value. As the theoretical field of human security expands, its utility needs to be tested through application. The creation of a set of principles guiding programming across several sectors can be a first step in this direction. This paper attempts to define a human security approach with reference to human health. What does health security entail?

¹ Virchow R. Collected essays on public health and epidemiology. Cambridge: Science History Publications as quoted in World Health Organization, "Action on the Social Determinants of Health: Learning From Previous Experiences", A background paper prepared for the Commission on Social Determinants of Health, World Health Organization, March 2005, accessed March 10, 2005

² UNAIDS (2004) "Global Summary of the AIDS epidemic December 2004" in World AIDS Day 2004 AIDS Epidemic Update, http://www.unaids.org/wad2004/EPI_1204_pdf_en/Chapter0-1_intro_en.pdf

³ Wilson, M. "Health and Security: Globalization of Infectious Diseases" Chp 6 in *Global Health Challenges for Human Security*, eds. Leaning and Arie, Harvard University Press, 2003: pg. 88

This paper reviews the current human security theory and suggests that a human security approach to any field could encompass three main elements:

- a) A focus on the individual as the nexus of analysis
- b) Use of equity as the process to reduce vulnerabilities
- c) A pursuit of institutionalized, responsive and preventive solutions.

As applied to health care, these principles promote programming which addresses social determinants of health and provides comprehensive protection from ill health rather than disease based interventions. Section 3 and 4 then examine the interconnection between health issues and human security and apply the above elements to the pursuit of health security. In this discussion, three interventions in the health sector are illustrated as being characteristic of a human security approach to health. These include: public management of water and sanitation, the campaign for civil registration and the pursuit of universal primary health care. Section 5 and 6 then extend this analysis to the HIV epidemic.

After reviewing the impact of HIV on human security, this paper examines the application of the principles above and the health security interventions as solutions to some of the challenges faced by the current international response to the HIV epidemic.

II. Modeling the Human Security Approach

*Let us not pray to be sheltered from dangers
but to be fearless when facing them.*
-Rabindranath Tagore

Human security is an enticing concept. Like the idea of freedom, no one can quantify it and yet everyone is aware when it is lacking. It is no wonder that when Mahbub ul Haq wrote one of the lasting definitions of human security in the 1994 UNDP report, he emphasized:

“In final analysis, human security is a child who did not die, a disease that did not spread, a job that was not cut, an ethnic tension that did not explode in violence, a dissident who was not silenced. Human security is not a concern with weapons- it is a concern with human life and dignity.”⁴

Haq goes on to delineate human security as a concept that is universal, interdependent, preventative and human-centered. These terms are meant to contrast the traditional idea of security which is state centered. They are meant to expand the scope of how we understand security. Alkire poses, “the objective of human security is to safeguard the vital core of all human lives from critical pervasive threats, in a way that is consistent with long- term human fulfillment.”⁵This definition can be dissected into three main components: the idea of a vital core as a basic right of every human being and the ultimate goal of development, the recognition that external and internal threats threaten this development and finally, and supposition that human security is protection from

⁴ Haq, M, “Chapter 2: New Dimensions of Human Security” *Human Development Report 1994: New Dimensions of Human Security*. United Nations Development Programme, New York: pg. 22
http://hdr.undp.org/reports/global/1994/en/pdf/hdr_1994_ch2.pdf

⁵ Alkire, S., “Conceptual Framework for Human Security”, Commission for Human Security, February, 2002: pg. 1, accessed November 15, 2004, <http://www.humansecurity-chs.org/activities/outreach/frame.pdf>

these threats and hence different from development itself. Although most actors agree with this basis of human security, there is much debate about what constitutes as a threat. Are threats directly physical, violent and personal or are they systemic and tied to vulnerabilities that come from poverty, ill health, and environmental degradation? In short, is human security “freedom from fear or freedom from want”? The Canadian government, for example, defines human security threats as “terrorism, drug trafficking and the illicit trade of small arms”⁶, issues that require a human centered view since they flow across borders and increase common insecurity, but are solely violent in nature. On the other side of the spectrum, the Japanese government advocates a broader definition, emphasizing the fact that human insecurity stems from all “threats to human lives, livelihoods, and dignity and to bring out the full potential of each individual.”⁷

How can the concept of human security be mobilized for programming? Critics of this expansive definition argue that its wide scope makes it useless as an analytical tool. Paris advocates the use of human security as a field of study that looks at all non-military threats to communities and individuals, hence separating it from the traditional military field.⁸ Most recently, Leaning and Arie have explored a new dimension of the human security discussion which had hereto been ill addressed: namely, the psychosocial elements that contribute to the human sense of security. They argue that a new model of human security must be developed that goes beyond the material resource based measurement of security to one that recognizes the resilience that individuals and

⁶ Department of Foreign Affairs, Canada, “Canada’s Human Security Website” Canadian Foreign Affairs website, accessed December 2, 2004. <http://www.humansecurity.gc.ca/menu-en.asp>

⁷ Ministry of Foreign Affairs of Japan (MOFAJ), “The Trust Fund for Human Security For the “Human-centered” 21st Century” MOFAJ website, accessed December 2, 2004. http://www.mofa.go.jp/policy/human_secu/t_fund21/what.html

⁸ Roland Paris, ‘Human Security: Paradigm Shift or Hot Air?’, *International Security*, 26:2 (2001). Pg. 96

communities maintain, “resilience when their core attachments to *home, community* and *the future* remain intact.”⁹

Others have defined human security in contrast to human development. If development is the process through which the capabilities and choices for human beings are increased then human security is protection from events which hamper the ability of humans to utilize their capabilities and choices. Hence, human security in development is the creation of safeguards against all sources of insecurity faced by the poor, such as shocks to livelihoods through ill health, macro-economic stressors, and natural disasters.¹⁰

Secondly, human centered development evolved from the realization that national economic growth does not eradicate poverty among the marginalized. The “horizontal inequalities” reduce opportunities and increase risk and vulnerabilities for some groups more than others. The World Institute for Development Economics Research defines these horizontal inequalities as, “...unequal allocation of economic, cultural and political resources among identity groups defined by characteristics such as class, ethnicity, profession, geographic origin, or religion.”¹¹ Embedded in this discussion is the realization that a macro lens to development glosses over the sharp differences in wellbeing between individuals and groups. Similarly, security is also a many tiered good. Even within safe countries some groups face higher levels of insecurity. Human security is an evaluation of the collective wellbeing based on the sum of the insecurities of

⁹ Leaning, J., Arie, S., “Human Security: A Framework for Assessment in Conflict and Transition” CERTI-Conflict and Transition Toolkit, Linking Complex Emergency Response with Transition Initiative, USAID Publication, December 2002, <http://www.certi.org/publications/policy/human%20security-4.htm>

¹⁰ Ball, N., “Report of a conference organized by the Programme for Strategic and International Studies, Graduate Institute of International Studies, Geneva” Human Security Network, Geneva, 2001: executive summary, accessed November 20, 2004. http://www.humansecuritynetwork.org/docs/report_may2001_3-e.php

¹¹ Ball, N 2004

individuals. Threats to the individual are a precursor to threats on society. One human life lost impacts the family, the community and the economy. Each individual is a foci, extending from and impacting on which are social, political and economic risks, and natural vulnerabilities. A focus on the individual provides greater information about the actual state of security of a country and the extent of various threats. It reaches vulnerable individuals in traditionally safe groups. For example, a domestic abuse victim from an affluent background or an individual of a developed country without health insurance would be considered as facing higher rate of insecurities.

The actual human security analysis evaluates the dynamics and processes which create inequality in wellbeing for the individual with the goal of correcting this imbalance. In this sense, human security is the protection from persecution, lack of justice and effects of threats which selectively impact some groups.¹² The human security approach uses equity as the process as well as a principle. How should equity be attained? How should these safeguards be implemented?

Alkire expands on the concept of safeguards and states, “The human security approach urges institutions to offer protection which is institutionalised, not episodic; responsive, not rigid; preventative, not reactive.”¹³ Natural disasters are a case in point. In the past four decades, large scale natural disasters, “have caused major loss of human lives and livelihoods, the destruction of economic and social infrastructure, as well as environmental damage.”¹⁴ During this time, the economic cost of these disasters has

¹² Ball, N 2004

¹³ Alkire, S., “Conceptual Framework for Human Security”, Commission, pg. 2

¹⁴ United Nations International Strategy for Disaster Reduction, “Disaster Reduction and Sustainable Development: Understanding the links between vulnerability and risk to disasters related to development and environment” A background paper to World Summit on Sustainable Development (Johannesburg, 26 August- 4 September 2002), UN publications: Geneva, 2002: pg. 5

increased almost 10 times.¹⁵ The increase in cost is related to exponential rise in human population in areas which hold a tenuous relationship with nature. Disaster reduction, that is decreasing the vulnerability to the hazards of natural disasters, requires preventive planning. Large scale public programs such as early warning systems are driven by centralized planning. This principle holds for threats emanating from almost all sources, from communicable diseases to crime. An 'institutionalized' protection is synonymous with not only the involvement but also the leadership of national governments in the process. Alkire recognizes that a preventive response requires fore planning and flexibility, both of which involve a working partnership between the international, national and local actors. To this end, the human security approach requires a prerequisite amount of effective governance.

Utilizing the defining features of the field and Alkire's breakdown of protection, it is possible to recognize three key principles which underlie the operationalization of human security: a development of agenda from analysis of risk and vulnerability from the level of the individual; the recognition and the effort to counteract inequity in environmental risk and systemic vulnerabilities; and an emphasis on solutions which provide an institutionalized, constant and proactive protection.

These elements are explored further in the next two sections, specifically as they relate to the health care sector.

¹⁵ *ibid.*

III. Linkages between Health and Human Security

"We have to stop separating politics from the physical world--the climate, public health, and the environment."

-Tad Homer Dixon, 1994¹⁶

Health issues are perhaps the easiest aspect of the development agenda to intersect with human security. At the most basic level, the goal of both human security and health security is the same: the sanctity of human life. Hence, in some ways all threats to human security are challenges to health security since all of these threats can translate into detrimental physical, emotional or psychological effects on human well being. In principle, the inverse must also be true. Illnesses that significantly deteriorate life expectancy and quality of life and cause an increase in insecurity in other sectors (such as economic, environmental etc) must be treated as central to human security analysis. The Commission on Human Security articulates, "Health security is at the vital core of human security---- and illness, disability and avoidable death are "critical pervasive threats" to human security."¹⁷

This definition threatens to become too broad and therefore analytically useless. To avoid this peril, the Commission focuses on three issues that illustrate connection between health and human security. These are global infectious diseases, diseases of

¹⁶ Homer Dixon as quoted in Kaplan, R., "The Coming Anarchy: How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet" The Atlantic Monthly, February 1994, from the Atlantic Monthly website, accessed December 10, 2004.

<http://www.TheAtlantic.com/atlantic/election/connection/foreign/anarcf.htm>

¹⁷ Commission on Human Security, "Chapter 6: Better Health for Human Security," Human Security Now: The Commission of Human Security Report: pg 96, accessed November 24, 2004, <http://www.humansecurity-chs.org/finalreport/chapter6.pdf>

poverty and conditions related to violence and conflict. These are all causes of undue death which are preventable.

“Control of infectious epidemics thus has positive externalities where protecting where protecting an individual has wider benefits for others. Poverty and its health threats are not only morally unacceptable--- they also generate conditions for new pathogens, disease transmission and social and political pathologies. Reducing violence protects victims—and also reduces the “culture of violence” that perpetuates it.”¹⁸

Each of these groups of illnesses plays a role in individual and state security. The global disease burden of infectious diseases is immense: of the 54 million deaths worldwide in 1998, about one quarter or one third were caused by infectious diseases.¹⁹ A recent report from the Central Intelligence Agency relates the impacts of global infectious diseases to US security:

“New and reemerging infectious diseases will pose a rising global health threat and will complicate US and global security over the next 20 years. These diseases will endanger US citizens at home and abroad, threaten US armed forces deployed overseas, and exacerbate social and political instability in key countries and regions in which the United States has significant interests.”²⁰

Wilson reiterates these linkages and presents new challenges created by infectious diseases in an era of globalization. She underscores the importance of increased movement of human beings, trade, exchange of ideas, social mores and values to the spread of infectious diseases. The amplified exchange of humans, biological substances and trade has exponentially increased “the scale, speed, and the reach of interconnection.”²¹ In the last three decades, over thirty previously unknown diseases

¹⁸Commission on Human Security, “Human Security Now”, pg. 102

¹⁹ Gannon, J. “Global Infectious Disease Threat and Its Implications for the United States.” National Intelligence Council, NIE 99-17D, January 2000, Accessed December 1, 2004. <http://www.cia.gov/cia/reports/nie/report/nie99-17d.html>

²⁰ *ibid*

²¹ Wilson, “Health and Security: Globalization of Infectious Diseases” Chp 6 in *Global Health Challenges for Human Security*, eds. Leaning and Arie, Harvard University Press, 2003: pg. 89

such as HIV, Ebola and Hepatitis C have been identified. There are currently no cures any of these infections.²²

In 'The Coming Plague', Lori Garrett illustrated how disease evolution is linked to human behavior and environmental degradation. Garrett narrates the story of how post WWII changes in agricultural practices in the San Joaquin, Bolivia created a favorable habitat for a rare mouse vector, which eventually caused an epidemic Bolivian hemorrhagic fever.²³ History is replete with examples of disease expansion as a result of human movement. The conquest of the Aztec by Cortes in fifteenth century was decided by the spread of small pox introduced by the European travelers. Between 1518 and 1568, small pox erased 90 percent of the population of the Aztec Empire, reducing the Native American population from 30 million to 3 million by some estimates.²⁴ In Cortes' age, distance served as a barrier to widespread influence of endemic diseases. Modern travel has erased these barriers. In 1999, almost 400 million travelers entered the United States by air, land or ship.²⁵ Increased travel is changing the geographical scope of microbes. It is taking strains that have been previously been in equilibrium with their environment and creating a new expanse of spread for them. It is also introducing genetic variability in various previously controlled strains by introducing resistance. It is allowing that resistance to be carried globally. Over twenty well known and previously stymied diseases such as TB, malaria and cholera have re-emerged with new virulence

²² Gannon, J. *ibid*

²³ Garreth, L. "Machupo" in the Coming Plague: Newly Emerging Diseases in A World Out of Balance, Harper Collins Publishing 1994: pg. 13-29

²⁴ Tschanz, D. "The War Against Smallpox", The Strategy Page, <http://www.strategypage.com/articles/smallpox/default.asp>

²⁵ Wilson, "Health and Security: Globalization of Infectious Diseases" Chp 6 in *Global Health Challenges for Human Security*, eds. Leaning and Arie, Harvard University Press, 2003: pg. 89

since 1973.²⁶ Resistance travels both ways between the developed and developing world. Resistance to antimicrobials is related to either inadequate or inappropriate use. Malaria is a good case in point. The WHO reports that most of the world will soon become resistant to first generation antimicrobial agents employed in the treatment of malaria. Wilson reviews how the resistance of *Plasmodium falciparum*, one of the malaria species, to chloroquine traveled from its site of origin, most likely Colombia and the Thai-Cambodian border, around late 1950s and spread across South America, Southeast Asia and India in the next two decades.

Globalization and technology is also expanding the threat of diseases as weapons. The recent incidences of anthrax and small pox threats illustrate that diseases can be used to instill terror. Just as the proliferation of nuclear weapons and small arms has been complicated by the presence of non state actors, infectious agents too present a very real and unpredictable threat. As opposed to nuclear and traditional arms, microbes are much more insidious since “their invisibility, mobility, adaptability, and silent incubation periods [render] national borders meaningless.”²⁷ These major changes in the last decade have forced a shift to global health from international health. Store et al explain, “While the latter term focuses on relations among sovereign nations, the concept of global health encompasses health affairs within and among nations-states, as well as transnational challenges not defined by political borders.”²⁸ This new nomenclature marks a functional and political change signaling increased commitment from sovereign states to ensure that local health challenges abroad are met. The 2003 SARS outbreak served as a wake up

²⁶ Gannon, J. *ibid*

²⁷ Heymann, D. “Evolving Infectious Disease Threats to National and Global Security” in Global Health Challenges for Human Security. 2003: pg.106

²⁸ Store, J, Welch, J., Chen, L., “Health and Security For A Global Century” in Global Health Challenges for Human Security. 2003: pg. 68

call for the international community. In a matter of couple of months, the SARS epidemic resulted in 8,450 infections in 28 countries, and at least 810 deaths.²⁹ The World Health Organization (WHO) has become intermediary in assuring that nations are transparent and responsible in managing threats within their borders. Collaborations like the Global Outbreak Alert and Response Network (GOARN) have brought together “technical and operational resources from scientific institutions in Member States, medical and surveillance initiatives, regional technical networks, networks of laboratories, United Nations organizations”³⁰ and other international organizations in an effort to monitor the risk of outbreaks. The GOARN was initiated in 1997 and fully established in April, 2000. Between 1998 and 2001, “the network verified 578 outbreaks in 132 countries indicating the system’s broad geographical coverage.”³¹

As opposed to traditional weapons and nuclear weapons, microbial threats cannot be controlled by secure borders and monitoring alone. The management of this threat requires that the conditions which contribute to development and propagation of diseases be recognized and halted. Such an approach also addresses the diseases of poverty and threats to health from violence. Aside from its direct effects on population health, an increased communicable disease burden taxes already struggling economies. In some sub-Saharan countries, the toll of infectious diseases “could reduce GDP by as much as 20 percent or more by 2010.”³² Resistance adds to this burden since pursuing treatment with expensive second generation drugs is unfeasible for many health care consumers in

²⁹ Dixon, P, “The Truth about SARS Infection”, The Global Change website, 2003
<http://www.globalchange.com/sars.htm>

³⁰ Global Outbreak Alert and Response Network, “Communicable Disease Surveillance & Response (CSR)”, World Health Organization, 2004: <http://www.who.int/csr/outbreaknetwork/en/>

³¹ Heymann, D. “Evolving Infectious Disease Threats to National and Global Security” in Global Health Challenges for Human Security. Pg. 115

³² Gannon, J.

the developing and even the developed world. The poor of the world face a disproportionate amount of the burden of communicable diseases. The Commission on Human Security terms these as ‘the diseases of poverty.’ A World Bank report on the subject quotes, “Communicable diseases are responsible for 77 percent of the mortality gap and 79 percent of the DALY [Daily Adjusted Life Years] gap between the world’s poorest and richest 20 percent.”³³ In many African countries acute respiratory infections account for up to 20% of the mortality in children under five years, compared to 5% in industrialized nations.³⁴

The economic cost of disease is two fold: the loss of wages related to sickness and the actual cost of health care services and medications. The poverty and disease trap is well documented. Akin to large scale natural or man made disasters, illnesses stretch and destroy safety nets and contribute to insecurity about the future for a large percentage of the world living in poverty. This group is most vulnerable to communicable diseases due to the proximity of their work and home to reservoirs of disease vectors. An urban livelihoods study in Dhaka, Bangladesh, identified “illness as a key constraint on “bustee” [slum] households’ ability to secure their livelihoods.”³⁵ Illness resulted in loss of income, employment insecurity and increased household expenditure on health care. Within household, women who were not wage earners were more likely to have delayed access to health care. In cases where they were wage earners, they were either left behind by their husbands or forced to except polygamous marriages if they lost their ability to

³³ Gwatkin, D., Guillot, M., “The Burden of Disease among the Global Poor: Current Situation, Future Trends, and Implications for Strategy.” A publication of the Global Forum for Health Research and The World Bank, 2000. pg. vi.

³⁴ Wilson, M. “Health and Security: Globalization of Infectious Diseases” in Global Health Challenges for Human Security, pg. 88.

³⁵ Kabir MA, Rahman, A., Salway, S., Prye, J., “Sickness Among the Urban Poor: A Barrier to Livelihoods Security” *Journal of International Development*, 12:5, 2002: pg. 707

work due to illness. Diseases and injuries serve as a ‘shock’, introducing insecurity on an everyday basis and forcing households to employ coping mechanism such as taking out loans, selling assets, merging households and migrating to rural areas.³⁶ This shock is compounded if the healthcare system is not easily accessible, too expensive, or of poor quality.³⁷

The disease and poverty trap is also evident at national and regional levels. In 2004, 34 of the 42 economies classified by the World Bank as part of Heavily Indebted Poor Countries (HIPC) group belonged to Sub Saharan Africa (SSA).³⁸ Ironically, these are the countries facing some of the largest health challenges. Sub-Saharan Africa carries 90 percent of the global malaria burden and 40 percent of all childhood deaths from diarrheal diseases.³⁹ Of the 40 million persons living with HIV at the end of 2001, 70% are in Sub-Saharan Africa.⁴⁰ There is a strong connection between health and state security. The relationship is as follows: large scale public health disasters decrease state capacity, which in turn impacts the state’s ability to maintain security, both at and within borders. Components of state capacity include “sovereign integrity, financial resources, loyal and skilled officials, stable administrative-military control, and the authority and institutional mechanisms to employ the state’s resources.”⁴¹ A pandemic such as HIV affects all of these subcomponents, impairing state capacity. The mechanisms of this

³⁶ Kabir MA, Rahman, A., Salway, S., Prye, J., “Sickness Among the Urban Poor: A Barrier to Livelihoods Security” *Journal of International Development*, 12:5, 2002: pg. 707-722.

³⁷ Bates, I, Fenton, C., Gruber, J., Lalloo, D., Lara, A., Squire, S., Theobald, S., Thomson, R., Tolhurst, R., “Vulnerability to malaria, tuberculosis, and HIV/AIDS infection and disease. Part II: determinants operating at environmental and institutional level” *Lancet Infectious Diseases*, 2004; 4: 368–75, pg 371

³⁸ “World Bank list of economies (April 2004), World Bank Indicators database, the World Bank, 2004. <http://www.worldbank.org/data/aboutdata/errata03/class.pdf>

³⁹ Gannon

⁴⁰ Wilson, M. 2004 *ibid* pg 88

⁴¹ Theda Skocpol’s work eluded to in Price-Smith, A., Daly, J. “Downward Spiral: HIV/AIDS, State Capacity and Political Conflict in Zimbabwe” *Peaceworks*, volume 53, July 2004 pg. 13

argument are discussed in more detail in the next section. It is important to note, as Price-Smith (2002) observes, that the “empirical existence of an asymmetrical feedback loop between population health and state capacity, with population health exhibiting a greater downstream effect on state capacity than vice versa.”⁴² In examining the impact of HIV on the state capacity of Zimbabwe, Price-Smith and Daly (2004) comment,

“Zimbabwe’s endogenous state capacity determines the scale of adaptive resources that the nation can mobilize to mitigate the negative effects of HIV/AIDS. Unfortunately, the country is trapped in a vicious cycle: as the HIV/AIDS epidemic progressively takes its toll, so Zimbabwe’s state capacity declines, and as Zimbabwe’s state capacity declines, so the nation’s ability to institute creative HIV/AIDS intervention strategies correspondingly diminishes.”⁴³

Conflict further compounds the population health. A study on the public health effects of conflict reports, “Globally, conflict is estimated to have caused 310 000 deaths in the year 2000, with more than half taking place in sub-Saharan Africa.”⁴⁴ The health impacts of conflict are immense. Murray et al (2002) recount, “Conflict obviously causes deaths and injuries on the battlefield, but also health consequences from the displacement of populations, the breakdown of health and social services, and the heightened risk of disease transmission.”⁴⁵ Assessing the true extent of war on non-conflict deaths has been difficult. The widely quoted ratio of indirect to death conflict death is 9:1.⁴⁶ However, such analysis requires a comparison of existing data about a country in conflict with what its disease burden would resemble had it not been in conflict. To date, there are no dependable models available for this kind of research. Anecdotally, Murray’s group

⁴² Price-Smith, A, *The Health of Nations: Infectious Disease, Environmental Change and Their Effects on National Security and Development* (Cambridge, Mass.: MIT Press, 2002); pg. 18

⁴³ Price-Smith, A., Daly, J. “Downward Spiral: HIV/AIDS, State Capacity and Political Conflict in Zimbabwe” *Peaceworks*, volume 53, July 2004 pg. 27

⁴⁴ Murray, C.; King, G.; Lopez, A.; Tomijima, N.; Krug, E “Armed conflict as a public health problem” *British Medical Journal*, 2002; pg. 324;346-349

⁴⁵ Murray, C.; King, G.; Lopez, A.; Tomijima, N.; Krug, E “Armed conflict as a public health problem” *British Medical Journal*, 2002; pg. 346

⁴⁶ Murray et al *ibid*, pg. 346

argument is very appealing. Widespread violence and on going conflict also degrade national resources (economic and natural). They dampen market economies, drive resources away from the social service sector, and decrease employment opportunities by destroying infrastructure and reducing capital.⁴⁷ Interpersonal violence is similarly detrimental and is connected to decreasing community resources. Country income is one of the strongest predictors of violence rates. Meddings et al (2004) report, “Violent death rates for low- to middle- income countries are more than twice those of high income countries, and over 90% of violent deaths occur in low- and middle-income countries.”⁴⁸ Both collective and interpersonal violence are correlated with horizontal inequalities. Rising homicide rates are linked with subsequent increases in the Ginni coefficient, an indicator for inequality in income distribution.⁴⁹

Gender inequality manifested in differences of access to services, capital and education also manifests as interpersonal and community violence, and subsequently negative outcomes to health. Access and assets decide bargaining power. At the intra house-hold level, “intra family decisions involving significant inequalities in the allotment of food, money, and health care have important implications for the welfare, health, and security of women.”⁵⁰ These inequalities affect women’s access to health care services in resource poor settings. Low bargaining power in women decreases the use of

⁴⁷ Meddings, D., Bettcher, D., Ghafele, R., “Violence and Human Security: Policy Linkages” in Global Health Challenges for Human Security, 2004. pg. 167. Meddings et al specifically point to evidence that rates of vaccination and other public health works are significantly reduced during conflict.

⁴⁸ Meddings, D., Bettcher, D., Ghafele, R., “Violence and Human Security: Policy Linkages” in Global Health Challenges for Human Security, 2004. pg. 164

⁴⁹ Meddings et al *ibid*, pg. 171

⁵⁰ *ibid* . Pg. 184

barrier contraception and subsequently contributes to disease propagation.⁵¹ Many women avoid broaching the topic of condom use for fear of violent reprisal.

Violence against women is pervasive, often related to both poverty and tradition, and can take the form rape, genital mutilation, child marriage, honor killings, dowry-related abuse, acid throwing, trafficking, forced prostitution in peace time alone.⁵² Johnson et al review numerous population based surveys and report partner violence is widespread and “between 10% to over 50% of women report having being abused physically by a male partner at least once in their lives.”⁵³ The data for sexual violence is limited but a recent WHO meta-analysis showed that childhood sexual abuse rate was 25% for women and 8% for men. The rate of gender based violence is exponentially increased during conflict. Rape is often used as a political and cultural tactic when the conflict is ethnocentric. From 1992 to 1995, 20,000 to 50,000 women were raped during the Bosnia-Herzegovina conflict.⁵⁴ Sexual violence causes a higher prevalence of diseases such as HIV. According to Amnesty International report on the Rwandan genocide, “at least 250,000 women were raped during the genocide, a large number of whom were subsequently executed. Of the survivors, 70% are estimated to have been infected with HIV.”

⁵¹ Pettifor, A.E., Measham, D.M., Rees, H.V., Padian, N.S., “Sexual Power and HIV Risk: South Africa” Emerging Infectious Diseases, the Center for Disease Control, Vol. 10:11, November 2004.

<http://www.cdc.gov/ncidod/EID/vol10no11/04-0252.htm>, Authors discover that although there is no direct correlation between sexual power and HIV rate, the common factor may be the frequency of condom use.

⁵² Johnson, S., Garcia-Moreno, C., “Gender, Health and Security” in Global Health Challenges for Human Security. Pg. 192

⁵³ Johnson, S., Garcia-Moreno, C., “Gender, Health and Security” in Global Health Challenges for Human Security. Pg. 193

⁵⁴ *ibid.* 196

The underpinnings of all three topics highlighted in the Commission for Human Security (international infectious diseases, diseases of poverty and violence) are formed by inequities in risk and vulnerabilities. How can this understanding of ill health be translated into government and donor programming?

IV. Defining Health Security

The preceding discussion outlines the connections between ill health and security. What does a human security approach bring to the health sector? Caballero-Anthony (2004) states that when an issue is securitized, “it is able to find an audience or, for those who are securitizing it, persuade others that this referent object or issue is threatened and requires priority over and above other referent issues.”⁵⁵ Similarly, the introduction of health issues on the security agenda may bring anew the political commitment and funding to long standing goals of health and development. The challenge will lie in recognizing what programs should gain priority and how the approach will differ from the work done in the past.

Much of the focus on health within the human security field has been on global health security: how do disease trends of one region impact those across borders? Whereas, in the original 1984 UNDP report, Haq defines the theory at the individual and community level. He explains, “the concept of human security stresses that people should be able to take care of themselves: all people should be able to meet their essential needs.”⁵⁶ The report defines insecurity as not only diseases but also the conditions that foster ill health. In Haq’s analysis, the evident fact that some groups have greater chances of exposure to harmful living environments is a matter of human security.⁵⁷ In

⁵⁵ Caballero-Anthony, M., “Human Security And Primary Health Care in Asia: Realities And Challenges” Chapter 13 in *Global Health Challenges for Human Security*, eds. Leaning and Arie, Harvard University Press, 2003: pg. 238

⁵⁶ Haq, 1994 UNDP Report, pg. 3

⁵⁷ *ibid* pg. 6-7

essence, he envisioned *health security* and created a framework on which future examination of the subject is built. The Commission for Human Security likens health security to, “police and fire protection, an indivisible good, with strong multiplier effects. Improvements in health anywhere benefit everyone everywhere.”⁵⁸ However, there is no definitive description of human security, let alone health security. By clarifying health security, we are not only visualizing the end result but also elaborating a human security methodology. A solidification of the idea of health security will serve to functionalize human security in general, which has many times been accused of being too vague.⁵⁹

In so much as ‘health security’ is a component of human security, it should carry the same central philosophy: “to protect the vital core of all human lives from critical and pervasive threats, in a way that is consistent with long term fulfillment.”⁶⁰ This definition carries three central premises. The first premise is a focus on the *individual* as the nexus. In the context of health, this idea translates into the pursuit for a maximum number of years lived out of poverty, disability and ill health for every human being. Each human being faces different risks and carries specific vulnerabilities depending on his/her geographical, social, economic, political and biological background. Hence, the health security approach views good health from the perspective of equity and examines the role of *inequity* in raising the insecurity of some individuals or groups more than others. It seeks to answer the following questions: What factors, institutional, political or environmental, have either detrimental or protective effects on population health? Do

⁵⁸Commission on Human Security, “Chapter 6: Better Health for Human Security,” Human Security Now: The Commission of Human Security Report: pg 96, accessed November 24, 2004, pg 102 <http://www.humansecurity-chs.org/finalreport/chapter6.pdf>

⁵⁹ Caballero-Anthony, M., “Human Security And Primary Health Care in Asia: Realities And Challenges” Chapter 13 in in Global Health Challenges for Human Security, eds. Leaning and Arie, Harvard University Press, 2003: pg. 238

⁶⁰ Alkire, pg. 2

certain policies, systems or individual behaviors exacerbate the inherent vulnerabilities of some groups over that of the general population?⁶¹ This analysis aims to build on the knowledge of both physiological as well as social determinants of disease. Lastly, when key determinants of ill health are recognized, it offers *protection that is institutionalized, responsive and preventative*.⁶²

The Commission for Human Security outlines these principles in the form of two strategies:

“A people-centered approach to global health would focus on empowerment and protection. Empowerment strategies would enhance the capacity of individuals and communities to assume responsibility for their own health....Protective strategies would promote the three institutional pillars of society: to prevent, monitor and anticipate health threats.”⁶³

Put simply, health security should be a two part guarantee: Protection against avoidable diseases and death, and assurance that the cost of treatment or the marginal cost of being sick does not amplify other insecurities. The following section provides some examples, by no means an exhaustive list, of human security centered interventions in the health field. Under protective strategies, the role of social determinants in health security is stressed and elaborated through discussion on water and sanitation. The example of civil registration as a tool for inclusion of vulnerable populations into central programming is meant to demonstrate the potential of individual level analysis for agenda formation. Lastly, universal primary care is highlighted as a response that is institutionalized and preventive against health insecurities. The advantages of the primary health care model are discussed.

⁶¹ World Health Organization, “Defining and Assessing Risks to Health” The world health report 2002 - Reducing Risks, Promoting Healthy Life, Chapter 2, World Health Organization Publication, Geneva, 2002. Accessed March 20, 2005, <http://www.who.int/whr/2002/chapter2/en/>

⁶² Alkire, S., “Conceptual Framework for Human Security”, pg. 2

⁶³ Commission for Human Security Report, Chp 6, Pg. 102-103

“To prevent, monitor and anticipate health threats”

*‘Where is the handle on this Broad Street pump?’
David Satcher, US Surgeon General Emeritus,
1997, when faced with complex public health
issues.⁶⁴*

In 1853, when London was ravaged by one of the worst epidemics of Asiatic cholera, claiming nearly 11,000 people, David Snow, an anesthesiologist and soon to be pioneer of epidemiology, made an interesting discovery. He drew a street map of cholera related mortality in the neighborhood of Soho and showed that majority of the deaths were in the houses that utilized water from a pump on Broad Street. He proposed that the disease was waterborne. The subsequent drop in the spread of cholera from the closing of the Broad street pump has had both biological and symbolic lessons for public health officials in the last two centuries.

The cholera example not only demonstrates the impact of environmental factors on health but also illustrates the ‘linchpin’ effect of certain interventions. In fact, research has shown that majority of the reduction in mortality from infectious diseases during the 19th century in industrialized nations occurred prior to the development medical therapies, and were related to “changes in food supplies and living conditions.”⁶⁵

Perhaps, the irony lies in the fact that over one hundred and fifty years after Snow, even armed with the knowledge, we have not been able to turn the handle on the

⁶⁴ Satcher, D., as quoted in American Academy of Family Physicians, “Look for the 'Broad Street pump' for good public health” FP Report, January 1997, accessed March 20, 2005, <http://www.aafp.org/fpr/970100fr/9.html>

⁶⁵McKeown T. 1976. The Modern Rise of Population. New York: Academic Press in World Health Organization, “Action On The Social Determinants of Health: Learning From Previous Experience,” A background paper prepared for the Commission on Social Determinants of Health, March 2005

pump. The WHO's Commission on Social Determinants of Health states, "An estimated 2.6 billion people — half of the developing world — lack access to improved sanitation." In sub-Saharan Africa, this access is limited to only 36%.⁶⁶ Each year, 1.8 million people, 90% of which are children under 5 years, die from diarrheal diseases, including cholera, mostly in developing countries.⁶⁷ In the current era of antibiotics and water purification techniques, close to 90 per cent of diarrheal disease can be attributed to lack of access to safe water supply, inadequate sanitation and hygiene.⁶⁸ The Commission on Social Determinants of Health states, "Almost half the people in the developing world have one or more of the main diseases or infections associated with inadequate water supply and sanitation: diarrhoea, intestinal helminth infections, dracunculiasis, schistosomiasis, and trachoma."⁶⁹

A WHO review of over 100 studies found that access to potable water and proper sanitation could reduce the median mortality secondary to water-borne diseases by almost 70 per cent.⁷⁰ It is hardly surprising that safe drinking water and sanitation have been attributed as one of the Millennium Development Goal (MDG)⁷¹ and should be considered integral to a human security approach to health. Yet in the face of past failures of publicly owned water and sanitation enterprises, the last decade has seen a rise

⁶⁶ World Health Organization, "Celebrating water for life: The International Decade for Action 2005-2015" *Resource Sheet 1*, WHO website, accessed March 1, 2005.

http://www.who.int/water_sanitation_health/2005advocguide/en/index4.html

⁶⁷ *ibid*

⁶⁸ World Health Organization, "Facts and Figures: Water, Sanitation and Hygiene Links to Health", Water and Sanitation Department, March 2004, accessed March 28, 2005,

http://www.who.int/water_sanitation_health/publications/factsfigures04/en/

⁶⁹ Bartram J., Lewis K, Lenton R., Wright A., "Focusing on improved water and sanitation for health." *Lancet* 2005; 365: pg 811

⁷⁰ Esray, S.A., Potash, J.B., Roberts, L, and Shiff, C. "Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma." *Bulletin of the World Health Organization* 69(5): 609-621. 1991.

⁷¹ WHO, "Meeting the MDG drinking-water and sanitation target: A mid-term assessment of progress" *Water Sanitation and Health (WSH)*, World Health Organization and United Nations Children's Fund Publication, 2004, http://www.who.int/water_sanitation_health/monitoring/jmp2004/en/

in private firms and private-public partnerships (PPPs) in this sector. Some of the major reasons cited for this movement, heavily backed by the International Monetary Fund and World Bank, have been the lack of efficiency and in some cases, lack of extension of services to those outside of urban centers through government operated enterprises. Ironically, the public service programs in many countries were heavily weakened by structural adjustment programs.⁷²

Water is a very lucrative business. Forbes business magazine wrote in May 2000, “Water promises to be to the 21st century what oil was to the 20th century.” Projected only on private water usage by 5 per cent of the world’s population, “In 1998, the World Bank predicted that the global trade in water would soon be a US\$800 billion industry and by 2000 this projection had been raised to one trillion dollars.”⁷³ However, neither one of the underlying reasons for the pursuit of privatization, equity or efficiency, is likely to be realized. Privatization of public works is moving water and sanitation from human rights to consumer goods, which can be available only to paying customers, hence excluding the poor at the outset. In such a setting, the onus remains on the government to create subsidized access to services for the poor. Secondly, the current water market is nearly monopolized by two firms, Vivendi and Suez, who carry 70 per cent of the world contracts. An article by One World Action explores the consequences of water monopolization in the setting of weak regulatory structures of most developing nations: an increase in prices and a lack of accountability for externalities (such as pollution).⁷⁴

⁷² Aegisson, G. “The great water robbery” One World Action , 2002, pg 5, accessed March 15, 2005, <http://www.oneworldaction.org/download/waterrobbery.pdf>

⁷³ *ibid* pg 5

⁷⁴ One World Action, pg. 5

The choice remains between the public regulation of public works, which requires good governance and greater political commitment or private enterprise which in the absence of the very same requirements can raise the barriers to access for some of the most vulnerable populations in the world. In light of the current burden of disease and the potential for turning the tide on water and sanitation related health determinants, it is necessary to reframe the public works dilemma in human security terms. In the final analysis, water and sanitation need to not only remain in the public domain but also on the global agenda to secure health security. The international efforts should be focused on enabling and promoting democratic local and national governance structures which can fulfill the task.

These same structures will aid in implementation of other critical public health goals such as disease surveillance. The interconnectivity of nations with relation to infectious diseases was explored in some detail earlier in this work. Global Outbreak Alert and Response Network (GOARN) is built on cooperation and information from sentinel surveillance stations in member states and data from non profit organizations and regional UN field offices. The success of international disease surveillance is dependent on the accuracy, responsiveness and dedication of viable national partners. In the industrialized world, civil registration offers vital statistics about mortality and allows public health officials to not only track population trends but also individual records. However, most developing countries do not have adequate civil registration systems. In these cases, the information about trends and magnitudes of diseases are built only on the portion of the population that is covered by either government sample surveys or non profit service areas. The numbers are then extrapolated to give national or regional

estimates, leaving myriads of individuals out of the calculation and future intervention. This method of disease surveillance provides a skewed picture, since 80 per cent of the 56 billion deaths annually occur in poor regions of the world.⁷⁵ It is estimated that, “less than one third of the world’s population is adequately covered by national vital registration systems and there is a wide regional variation ranging from 80% population coverage in the European region to less than 5% population coverage in the Eastern Mediterranean and African regions of WHO.”⁷⁶

Aside from the purposes of disease surveillance, civil registration rates have a profound impact on various individual securities ranging from access to institutional capital to health status. Rosario et state that institutional capital is “formed by the quality of transactions, agreements and consensus reached by individuals as part of their social and economic investment, both between themselves and with the State, to formalise, legalise and legitimise a social order.”⁷⁷ Civil registration is the equivalent of gaining an identity in the political and social security system. Yet, only 55 per cent of the children born in sub-Saharan Africa are given this identity at birth.⁷⁸ Documentation establishes parental relationship, heirship and citizenship. It provides reference for age-

⁷⁵ Sen, K., Bonita, R., “Global health status: two steps forward, one step back”, *Lancet* 2000; 356: pg. 577

⁷⁶ Sen, K., Bonita, R., “Global health status: two steps forward, one step back”, *Lancet* 2000; 356: 577–82, pg. 577

⁷⁷ Rosario, L.; Goulden, J.; Rea, C.; Salinas, H.; Medrano, L.; Schollaert, J. “Social exclusion, rights and chronic poverty in Bolivia” Chronic Poverty Research Centre (CPRC), UK , 2003, pg 13
<http://idpm.man.ac.uk/cprc/Conference/conferencepapers/Goulden%20Jay%20SocialExclusionandChronicPoverty.pdf>

⁷⁸ United Nations International Children’s Fund, “The 'rights' start to life: a statistical analysis of birth registration”, United Nations Children's Fund (UNICEF), 2005 pg 14, March 25, 2005
http://www.unicef.org/publications/files/rights_start_rev.pdf

related services such as school entry, right to work and driver's license.⁷⁹ Hence, lack of registration amounts to social exclusion.

The measure of the percentage of the population covered by the civil registration system is as vital as the analysis of who is not covered and why. A study by UNICEF showed that unregistered children less than five years of age “tended to be poor, live in rural areas, have limited access to health care, are not attending early childhood education, have higher levels of malnutrition and have higher mortality rates.”⁸⁰ Registration correlated with their access to the health care system. These children are more likely to be born without the presence of health care professionals or midwives. Their mothers tend to have low levels of both formal and health education. Evidence shows that registration rate is an indicator for access to systemic benefits such as health programs. Vaccination rates are higher in children who are registered.⁸¹

What factors deter individuals from registering? Some of the common reasons cited for non registration among new mothers included high cost, long travel distance and lack of knowledge about the procedure. Rosario et al draw the example of Bolivia where the unregistered are more likely to belong to groups that are traditionally discriminated against, such as women, youth, rural community dwellers and indigenous groups.⁸² It is likely that poverty not only contributes to the barriers to registration, but that the lack of institutional identity exacerbates social exclusion, lack of institutional capital and hence financial insecurity. Civil registration influences health security in three ways. It serves

⁷⁹ United Nations, “Handbook on Training in Civil Registration and Vital Statistics Systems” Department of Economic And Social Affairs, Statistics Publications Series F, No. 84 pg. 7

http://unstats.un.org/unsd/publication/SeriesF/SeriesF_84E.pdf

⁸⁰ UNICEF *ibid*

⁸¹ UNICEF, “The 'rights' start to life: a statistical analysis of birth registration”, United Nations Children's Fund (UNICEF), 2005 pg 14, http://www.unicef.org/publications/files/rights_start_rev.pdf

⁸² Rosario, et al *ibid*. Pg 7

as an indicator for individual access to the health infrastructure and outreach programs. It represents community inclusion in local governance and provides information about regional health status. At the macro level, it allows for more accurate disease surveillance, contributing to more effective national and international interventions. Sen et al, rightly maintain, “Better and more comprehensive data is a first step in the development of a stronger strategy to improve overall health and reduce inequalities in health status throughout the world.”⁸³

“To enhance the capacity of individuals and communities to assume responsibility for their own health”

“We shall not finally defeat AIDS, tuberculosis, malaria, or any of the other infectious diseases that plague the developing world until we have also won the battle for safe drinking water, sanitation and basic health care.”

-Kofi Annan, United Nations Secretary-General⁸⁴

Improvements in protection strategies should be coordinated with investment in the supply side of the health equation. This portion of the guarantee requires reform in the health service delivery sector, with improved access, quality and cost of care.

Health care for all has been not only a development goal but a passion for global health leaders including the former WHO director Halfdon Mahler. Mahler understood and advocated a comprehensive approach to health security. In his address to the 1976 World Health Assembly, he asserted, “Health for All implies the removal of the obstacles to health--that is to say, the elimination of malnutrition, ignorance, contaminated drinking water and unhygienic housing--quite as much as it does the solution of purely medical

⁸³ Sen, K., Bonita, R., “Global health status: two steps forward, one step back”, *Lancet* 2000; 356: 577–82, pg. 577

⁸⁴WHO, 2004, “Facts and Figures: Water, Sanitation and Hygiene Links to Health.”

problems."⁸⁵ Mahler led the crusade for universal primary health care (PHC) at Alma Ata in the form of the "Health Care for All by 2000" campaign. The vision at Alma Ata was the creation of technologically appropriate network of health resources linked to the development continuum and based on community mobilization. The model was meant to stand in contrast to vertical and targeted health campaigns which often bypass the local health care system. In the last two decades, some have argued that selective low cost interventions are more likely to have measurable effect, heralding a cadre of highly specific programs, resulting a field where most programs are now a 'patchwork' of the two approaches.

There is overwhelming evidence to support the success of the PHC model in promoting community health, particularly maternal and infant care. Programs such as Making Pregnancy Safer and Integrated Management of Childhood Illness have attempted to integrate health delivery for these two target groups.⁸⁶ A study comparing communities enrolled in the Andean Rural Health system, a primary health care program, to adjacent areas showed half the rate of under-five mortality among those neighborhoods with access to "prenatal care, immunizations, growth monitoring, nutrition rehabilitation, and acute curative services."⁸⁷ A nation wide study of Uganda showed general health care service availability served to decrease infant mortality above and beyond the benefits

⁸⁵ World Health Organization, "Action on the Social Determinants of Health: Learning From Previous Experiences", A background paper prepared for the Commission on Social Determinants of Health, World Health Organization, March 2005, accessed March 10, 2005

⁸⁶ Phyllida Travis, Sara Bennett, Andy Haines, Tikki Pang, Zulfiqar Bhutta, Adnan A Hyder, Nancy R Pielemeier, Anne Mills, Timothy Evans "Overcoming health-systems constraints to achieve the Millennium Development Goals" *Lancet* 2004; 364, pg. 901

⁸⁷ Perry, H., Shanklin D., Schroeder, D., "Impact of a Community-based Comprehensive Primary Healthcare Programme on Infant and Child Mortality in Bolivia" Centre For Health And Population Research, Bangladesh (ICDDR,B) , 2003, accessed March 25, 2005, <http://www.icddr.org/pub/publication.jsp?classificationID=30&pubID=4861>

from vaccination alone.⁸⁸ Similar trends can be seen in relation to presence of basic health care provider and/or facility and maternal mortality rates.⁸⁹

The appeal of the primary health care model is immense. By its very nature, PHC promotes health security. Rather than the disease, it establishes the individual as the center of intervention and “address[es] the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly.”⁹⁰ Rather than a timed and targeted intervention for a particular disease and its effects, PHC services create a constant net of protection and monitoring. The Cuban health care system follows this paradigm. At the community level, each neighborhood is followed by a family physician that is closely familiar not only with individual health status but also the trends across families. The physician serves as a source of care for community members and the center of information and intercession for the public health system.⁹¹ Although Cuba’s accomplishments have often been called impressive and irreproducible, they are based on the widespread reality that individual, family and community wellbeing are intricately related. A closer examination of worldwide child mortality rates reveals that these numbers arise not only from inequity between countries but also within

⁸⁸ Ssewanyana, S.; Younger, D. S., “Infant mortality in Uganda: determinants, trends, and the Millenium Development Goals” Development Policy Research Unit (DPRU), University of Cape Town, South Africa, 2004, pg. 21-22
http://www.commerce.uct.ac.za/dpru/dpruconference2004/Papers/Infant_Mortality_Rate_Younger.pdf

⁸⁹ Koblinsky, M., ed. “Reducing maternal mortality: learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, and Zimbabwe” Human Development Network, World Bank Publications, April 2003, http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2003/06/06/000094946_0305280402518/Rendered/PDF/multi0page.pdf

⁹⁰ World Health Organization, “Primary Health Care: A Framework for Future Strategic Directions” World Health Organization Publications, 2003. WHO/MNC/OSD/03.01, pg. 5
http://www.who.int/chronic_conditions/primary_health_care/en/phc_report_oct03.pdf

⁹¹ Pan American Health Organization, “Cuba: Basic country health profiles, summaries 1998.”
<http://www.paho.org/English/SHA/prflcub.htm>, accessed October, 20, 2004.

countries. Through this lens, it is clear that universal health care is not a peculiarity of some health systems; it is a requirement for maintaining universal health.

Some countries have approached the health services gap by creating separate 'health services for the poor.' Unfortunately, services for the poor become poor services. Often times, these services, due either to their location or lack of outreach to appropriate populations, are utilized at a higher rate by the rich than the poor. The creation of two parallel delivery systems further fragments the national public health infrastructure. Donors have come full circle since the Alma Ata by responding to lack of health infrastructure by funding vertical projects driven by global advocacy and outcry. The approach has been to bring governments up to par with donor agendas, hence circumventing problems of bad governance and lack of political commitment.

The PHC model is competing not only with vertical programming but with pilot program phenomenon where isolated communities are able to access health care through non profit efforts in a sea of limited resources. Some argue that these programs serve as a spring boards to future larger projects and testing fields to establish efficacy of different strategies.⁹² One such strategy is insurance schemes which allow for risk pooling and community participation in health mobilization. Although some programs have shown success, the overall difficulty of insurance schemes is the initial 'buy-in' by community members in the face of limited resources and the difficulty of maintaining service availability in areas where health costs are immense due to high HIV rates. In the end, without regulations, there is no onus on insurance schemes to cover the most vulnerable

⁹² Bennett, S; McEuen, M.; Moll, L.; Saunders, M., "The role of pilot programs: approaches to health systems strengthening" Partners for Health Reformplus (PHRplus) , 2004, pg 3, accessed April 1, 2005, <http://www.phrplus.org/Pubs/sp13.pdf>

groups. Kutzin (2000) illustrates the differences between schemes and systems. He states,

“The objectives of policy relate to the entire population and thus the overall health care system; insurance ‘schemes’ (and reforms related to them) should be assessed in terms of how the schemes contribute to the system-wide insurance objective.... policies that can improve the efficiency and sustainability of individual insurance schemes can, at the same time, have negative consequences for the efficiency and sustainability with which the entire health care system pursues the goal of universal coverage.”⁹³

Complexities of funding and administration have long deterred a mainstreamed donor effort from placing universal primary healthcare on the immediate agenda rather than the wish list. The health security lens illustrates that universal PHC is not a long term goal, but the means to accomplishing all other objectives within the health sector. Global health security requires accurate assessment of health threats and immediate responses. It demands that these threats be identified early and resolved at the local level. The central planning and emphasis on equitable distribution required for these tasks can only be accomplished by strong government commitment and involvement. Good governance is an irreplaceable component of success in the health sector. In 1985, the Rockefeller Foundation published a landmark study, “Good Health at Low Cost” which highlighted countries that had successfully implemented affordable primary care for the majority of their populations. An analysis of these countries recognized ‘five shared social and political factors’ which included: “historical commitment to health as a social goal; social welfare orientation to development; community participation in decision-making

⁹³ Kutzin, J., “Towards universal health care coverage: a goal-oriented framework for policy analysis” Health, Nutrition and Population Division (HNP), Human Development Department, World Bank , 2000, pg 40 http://www1.worldbank.org/hnp/Pubs_Discussion/Kutzin-TowardUniversal-whole.pdf

processes relative to health; universal coverage of health services for all social groups (equity); intersectoral linkages for health.”⁹⁴

Aside from government commitment, funding and human resources remain large obstacles. According to the Commission on Macroeconomics and Health (2001) a minimum of an additional \$22 billion per year by 2007, and \$31 billion per year by 2015 will be required to provide basic and critical health services to the developing world.⁹⁵ The role of donors is integral in synergizing efforts towards the common goal of establishing good health infrastructure and planning and advocating for change in policies on the international level that sustain the hurdles to health security. For example, an examination of out of pocket and system expenses on health care, demonstrates that the price of medications accounts for “up to 80 per cent of health expenditure in some developing countries.”⁹⁶ One third of the world’s population does not have access to essential medications. The initial investment in research on diseases that affect the developing world is also minimal. Currently, only 10 per cent of the world's health research budget given to combating problems that affect 90 per cent of the population. This is the so called 10/90 gap.⁹⁷ A purely market driven strategy to pharmaceutical development has created ‘orphan diseases of the poor’, for which there are no financial incentives in creation of vaccines and treatments. The gap in research and development

⁹⁴ Rosenfield P. The contribution of social and political factors to good health. In Halstead S, Walsh J, Warren K (eds). 1985. Good health at low cost. New York: Rockefeller Foundation. 173-85. in Commission for Social Determinants of Health, “Action on the Social Determinants of Health: Learning From Previous Experiences.”

⁹⁵ Harper, C. “A pro-poor approach is essential to ensure equity in child health” Childhood Poverty Research and Policy Centre (CHIP), CHIP Policy Briefing 7: Child Ill Health and Mortality-How Can We Prevent the Preventable, 2004, pg 1

⁹⁶ Ford, N., “Patents, access to medicines and the role of non-governmental organizations” Médecins Sans Frontières (MSF), Journal of Generic Medicines, vol.1. no 2. pg 137-145. January 2004, pg 138
<http://www.accessmed-msf.org/documents/FordJGM.pdf>

⁹⁷ Godlee, F., Pakenham-Walsh, N., Ncayiyana, D., Cohen, B, Packer, A., “Can we achieve health information for all by 2015?” www.thelancet.com Published online July 9, 2004
<http://image.thelancet.com/extras/04art6112web.pdf>

selectively affects the poor. These inequalities have made ‘Health Care for All’ difficult to achieve even half a decade after the year 2000.

The supply of health care personnel is equally threatened. In accordance with a renewed effort to provide primary health care, donors and governments will have measure up the challenge of training medical professionals and managing their distribution to places where they are a shrinking base of qualified health workers in most of the developing world. Chen et al discuss the global human resources crisis in the health sector, especially in the face of three challenges, the HIV epidemic, the migration of health workers out of developing countries and continued under-funding of this sector.⁹⁸ They state, “Sub-Saharan Africa has a tenth the nurses and doctors for its population that Europe has: Ethiopia has a fiftieth of the professionals for its population that Italy does.”⁹⁹ Store et al stress the importance of migration of highly skilled professionals from developing countries. They suggest that the exchange and retention of health care professionals should be viewed at the global level as a matter of equity.¹⁰⁰ Efforts should focus on improving the support and benefits to professionals working in resource limited settings. Assignment to underserved areas should be linked with appropriate incentives.

Both delivery of medicines and investment in human resources for health are examples of upstream interventions, or the Broad Street pumps, to establishment of a primary health care net in developing countries. With the new challenges of the HIV

⁹⁸ Lincoln Chen, Timothy Evans, Sudhir Anand, Jo Ivey Boufford, Hilary Brown, Mushtaque Chowdhury, Marcos Cueto, Lola Dare, Gilles Dussault, Gijs Elzinga, Elizabeth Fee, Demissie Habte, Piya Hanvoravongchai, Marian Jacobs, Christoph Kurowski, Sarah Michael, Ariel Pablos-Mendez, Nelson Sewankambo, Giorgio Solimano, Barbara Stilwell, Alex de Waal, Suwit Wibulpolprasert, “Human resources for health: overcoming the crisis” *Lancet* 2004; 364: 1984–90

⁹⁹ *ibid.* pg

¹⁰⁰ Store, et al 2004 pg 69

epidemic, it is important for the global community to establish the difference between strategies that are unsuccessful and strategies that are simply difficult. The following section examines the challenges posed by HIV to human security.

V. HIV and Human Security

“The heart of the security agenda is promoting lives- and we now know that the number of people who will die of AIDS in the first decade of the 21st century will rival the number that died in all the wars in all the decades of the 20th century.”
-Ex-Vice President Al Gore, January 10, 2000

Mr. Gore’s remarks above marked the occasion when the Security Council for the first time in its 54 year existence declared a disease as a threat to global security by passing Resolution 1308 (2000), which recognized the destructive power of HIV. Since the nascent of the epidemic, HIV has infected almost 60 million human beings worldwide and claimed over 20 million lives, with 3 million in 2003 alone.¹⁰¹ HIV is not a human security issue. It is *the* human security of this and the next generation.

HIV is unique among epidemics due to its long latency period and the impact of the related increased morbidity and mortality which spans over several decades. This latency has made the eventual catastrophe of AIDS seem distant and unreal, fostering even skepticism among some African lawmakers.¹⁰² Barnett and Whiteside (1999) suggest we should consider two epidemics: the HIV epidemic and subsequent epidemic of AIDS related illness and deaths.¹⁰³ The International Crisis Group (ICG) released a cautionary report in 2001, warning “...where it reaches epidemic proportions, HIV/AIDS

¹⁰¹ UNAIDS (2004) “Global Summary of the AIDS epidemic December 2004” in World AIDS Day 2004 AIDS Epidemic Update, http://www.unaids.org/wad2004/EPI_1204_pdf_en/Chapter0-1_intro_en.pdf

¹⁰² Fourie, P., Schönsteich, M., “Die, The Beloved Countries: Human Security and HIV/AIDS in Africa” Institute for Security Studies, South Africa, 2002: pg. 3
http://www.sarpn.org.za/documents/d0000177/P170_Security_HIVAIDS.pdf

¹⁰³ Barnett, T., Whiteside, A., “HIV/AIDS and Development: Case Studies and a Conceptual Framework” European Journal of Development Research 11 (2), 1999: pg. 220-234, [http:// www.aids-hepatitisc.org/stigma/hiv-aids-issues/AIDS-case-studies.pdf](http://www.aids-hepatitisc.org/stigma/hiv-aids-issues/AIDS-case-studies.pdf)

can be so pervasive that it destroys the very fibre of what constitutes a nation:

individuals, families and communities; economic and political institutions; military and police forces.” HIV has in fact permeated and worn away all components of human security.

-Economic security: HIV causes the stagnation of economic development and destroys existing gains. A HIV “adult prevalence rate of 10 per cent may reduce the growth of national income by up to a third. At infection levels above 20 per cent, studies show that a nation can expect a decline in GDP of 1 per cent per year.” HIV reduces the labor force human capital, and reduces savings and investment. As the human capital dissipates, the cost of doing business rises. At the household level, as the primary wage earner falls sick, or passes away, the household income is significantly decreased.

-Food security: The shock of HIV on the agricultural sector was largely understudied until the end of the last decade. As with any other sector, the decrease in workers causes shrinkage in the total available product, this case food. However, there is evidence that HIV/AIDS disproportionately affects agriculture compared to other sectors, “because the structure of the agricultural sector, especially the smallholder sub sector, is such that it is much less able to absorb the impacts of the human resource losses associated with the pandemic.”¹⁰⁴ The epidemic not only decreases the disposable income and livelihoods of the farming families but also leaves the rest of the society extremely vulnerable to stressors such as drought. In 1999, a farmers union in Zimbabwe

¹⁰⁴ de Waal, A., Tumushabe, J., “HIV and Food Security in Africa” A Report for DFID and Southern African Regional Poverty Network (SARPN), February 2003: pg.2, http://www.sarpn.org.za/documents/d0000235/P227_AIDS_Food_Security.pdf

reported 60 per cent decrease in maize, 47 percent decrease in cotton and 49 percent reduction in vegetable production due to the loss of its workers.¹⁰⁵

-Health security: The average annual cost for a person with AIDS on Medicaid in the United States is estimated to be \$33,737.¹⁰⁶ Over seven countries in Sub Saharan Africa already have adult prevalence rates of 20% or more. For patients in these countries and their government, hopes of matching such spending are purely fantastical. The annual health budget in most of the heavy hit countries is less than \$6 per capita.¹⁰⁷ As the medical facilities are overrun by AIDS related patients, the already strapped health systems are becoming even more depleted. At the level of the household, rising healthcare costs further increase economic insecurity.

-Environmental security: Although the connections between HIV and environmental degradation have not been studied extensively, there is proof that the reduction in cultivation leads to fewer practices of conservation. The lack of land conservation leads to erosion. Similarly, degradation of public works will reduce water quality.¹⁰⁸

-Personal (physical) security: The epidemic reduces life expectancy, increases infant mortality and the overall disease burden. It disrupts family units and community bonds. A study on Zambia showed that maternal death lead to the dissolution of 65% of

¹⁰⁵ Fourie, P., Schönteich, M., “Die, The Beloved Countries: Human Security and HIV/AIDS in Africa” Institute for Security Studies, South Africa , 2002: pg. 10

http://www.sarpn.org.za/documents/d0000177/P170_Security_HIVAIDS.pdf

¹⁰⁶ Wilson, M., Levi, J., Owen, A., “Mitigating Risk With HIV/AIDS Patients” Center For Health Services Research and Policy, George Washington School of Public Health, May 2002: pg. 2

<http://www.gwhealthpolicy.org/downloads/MitigatingHIV.pdf>

¹⁰⁷ McNeill, D., “AIDS Stalking Africa’s Struggling Economies,” NewYorkTimes, November 15, 1998.

¹⁰⁸ Hammarskjold, M., “The Environment, Natural Resources And HIV/AIDS” SIDA, Environment Policy Division, Division 2003: pg.12

the affected families.¹⁰⁹ HIV has already produced around 13 million orphans worldwide, with 95% in Africa alone. The number is projected to increase to 42 million by 2010.¹¹⁰ The breakdown of family units is happening against larger societal safety net destruction. As these children grow up without a social fabric or the guidance of parents, teachers and other adult figures, communal and interpersonal violence is projected to increase. Randy Cheek, a senior fellow at the National Defense University is quoted as saying, “the uneducated, malnourished, and purposeless mass of children represents a potential army in search of a leader.”¹¹¹

-Political security: Good governance, due process, and accountability are dependent on state capacity, which as discussed before, is severely depleted by the epidemic. HIV not only drains state reserve, but also reduces the tax base, and wipes out the next generation of politicians and public workers. Chronic health problems are removing a huge portion of citizens from the public spheres. Women, as primary care givers, are forced to leave the political arena. As the overall resources of these societies continue to drain, competition for the remaining assets will increase, but avenues for peaceable settlements of these conflicts are decreasing, both formally in the political field and informally through destruction of social capital.¹¹²

-Community and international security: Adding to the issue of social disintegration among AIDS orphans is the reduction in the civilian police force due to the disease. Both of these factors will create conditions favorable for higher criminal

¹⁰⁹ International Crisis Group, “HIV/AIDS As A Security Issue” An 2001 ICG Report, accessed through the USAID website, pg. 6, Accessed December 1, 2004

http://www.usaid.gov/regions/af/conflictweb/docs/aids_hiv.pdf

¹¹⁰ *ibid*

¹¹¹ Cheek, Randy B., Senior Fellow, Institute for National Strategic Studies, National Defense University, "A Generation at Risk: HIV/AIDS Orphans in Southern Africa and Threats to Regional Stability" (unpublished paper), March 2001 in ICG report *ibid*, pg. 7

¹¹² Fourie, P. et al pg. 12

activity. The loss of law enforcement personnel is evident at the regional level. In 1991, a report on UN peacekeeping and HIV/AIDS elaborated the toll of HIV on local peace keeping capacity and discouraged the deployment of HIV positive peacekeepers for three reasons. First, the conditions of peacekeeping operations are not conducive to providing appropriate medical care to HIV positive personnel. Secondly, the duties and the environment inherent to most peace keeping operations increase the chances of HIV positive staff contracting other diseases. Lastly, high HIV prevalence among deployed forces increases transmission to local population. These issues are paramount in places like Sierra Leone where over 30% of the peacekeeping force is thought to be HIV positive.¹¹³ As the AIDS epidemic reaches its peak, the capacity of regional countries to deploy troops will be significantly reduced, leading to increased regional and international insecurity.

These effects of the HIV epidemic on human security issues have been widely discussed. There is, however, a dearth in information about how such analysis can be translated into an educated response to the management of the disease and its secondary consequences. The following section puts forth some health security interventions as solutions to present dilemmas.

¹¹³ Christoff, J., "United Nations faces challenges in responding to the impact of HIV/AIDS on peacekeeping operations" United States General Accounting Office, Report to the Chairman, Committee on International Relations, House of Representatives, GAO-02-194, December, 2001: pg. 5. http://www.dec.org/pdf_docs/PCAAA969.pdf

VI. A Health Security Perspective on the HIV Epidemic

Now our approach to HIV/AIDS embodies the paradigm shift. The idea is to synergise swift responses to health emergencies with long-term strengthening of health infrastructure.

- Lee Jong-wook, Director-General, World Health Organization¹¹⁴

How can the health security approach help address some of the challenges faced by the current international response to the HIV epidemic? To examine this relationship, it is important to first outline the current strategy.

In 2003, \$4.2 billion were spent on the international HIV/AIDS effort, taking into account bilateral, multilateral, and non-profit sector contributions.¹¹⁵ This amount falls largely short of the \$7-10 billion the Global Fund for Tuberculosis, AIDS and Malaria calculates as essential for eradicating the epidemic in low and middle income countries worldwide. However, in recent years, the political momentum for international action to combat the HIV epidemic has increased. In the last four years, the Global Fund has served as an advocacy and funding tool to over 150 programs in 93 countries. In conjunction with the 3-by-5 Initiative, established with the goal of placing 3 million people on treatment by 2005, the Global Fund has revived the international effort. The WHO declaration of HIV as a health emergency and a steady increase in funding including President Bush's commitment of \$15 billion through the Emergency Plan for AIDS Relief over five years, indicate that the time is ripe to initiate lasting change. It is

¹¹⁴ Lee Jong-wook, "Global health improvement and WHO: shaping the future", *Lancet* 2003; 362: 2083-88

¹¹⁵ The Kaiser Family Foundation, "Fact Sheet: Global Funding for HIV/AIDS in Resource Poor Settings" A Kaiser Family Foundation Publication, 2004, pg 1, available at www.kff.org.

important to evaluate at this juncture whether the current mainstream of approaching the epidemic is sustainable, effective and equitable.

There are six main priorities in the fight against HIV: surveillance of HIV trends and distribution, prevention and education of the general public, testing and counseling of those at high risk, treatment of clinically appropriate individuals, monitoring of those on therapy, and support for those impacted by the illness.

The human security analysis of the present investment elucidates three critical lessons. First, disease surveillance which does include ‘hard to reach’ and vulnerable populations will create spaces for further propagation of the epidemic. Secondly, the scaling up antiretroviral therapy outside the setting of universal primary care will exacerbate inequities in health care. And lastly, promotion of only disease specific interventions without reduction of upstream risks, namely social determinants of health, will continue to impede the fight against HIV.

One Person at a Time

At the heart of the issue of civil registration is the importance of incorporating previously excluded populations into calculations of disease burden and programming distribution. Population surveillance for HIV trends faces similar issues. The WHO reports,

“The HIV/AIDS pandemic is composed of multiple and dynamic epidemics, even within a country. Therefore, HIV surveillance systems should be capable of being adapted and modified to meet the specific needs of each epidemic.” –World Health Organization, 2002¹¹⁶

¹¹⁶ Garcia Calleja, J.; Pervilhac, C., “Initiating second generation HIV surveillance systems: practical guidelines”, WHO Initiative on HIV/AIDS and Sexually Transmitted Infections (HSI), 2002, pg 7.

Whether it is due to political or geographical reasons, some high risk subgroups are systematic excluded from estimates. Although much of Africa has developed surveillance programs to track infection in pregnant women, the governments of these same countries find it politically difficult to invest in programs targeting sex workers, men who have sex with men and injecting drug users.¹¹⁷ As a result, in countries where the rate of HIV is not high in the general population, the rise of the disease in subgroups goes unnoticed. For example although the national prevalence of HIV in countries in the Sahel region remains around 1%, the rate of infection and the number of infected has steadily increased in high risk subpopulations. In Senegal, where the national “HIV prevalence is below 1%... prevalence rose among sex workers in two cities: from 5% and 8% respectively in 1992, to 14% and 23% in 2002.”¹¹⁸ While countries have been able to estimate the level of high risk activity, there is no standard methodology for estimating the actual size of the population at risk. These subgroups are considered ‘hidden’ or ‘hard to reach.’ Pisani (2002) suggests surveillance tactics for these groups should be innovative, utilizing organizations and institutions with whom they maintain regular contact. For example, where non profit organizations may serve as points of entry for sex workers, health and law enforcement institutions may serve as better starting points for injecting drug users. The principle of the responsive and individualized surveillance should be embraced by National AIDS Programmes. Surveillance should be designed according to the total general prevalence, the dominant mode of transmission (i.e.

¹¹⁷ Pisani, E. “Estimating the size of populations at risk for HIV: issues and methods” Family Health International (FHI), 2002, executive summary , accessed March 30, 2005, <http://www.fhi.org/NR/rdonlyres/e6axdwvytihsy6jtnwseglwebpydr537mnkcbdmaejwa5eck7zt5enezqa4xgr oxaovonly5yfb631/popsizcontent.pdf>

¹¹⁸ HIV InSite, “Sub-saharan Africa” Center for HIV Information, University of California San Francisco, accessed April 3, 2005, <http://hivinsite.ucsf.edu/global?page=cr09-00-00#S1.1X>

heterosexual contact, injecting drug use) and profile of the high risk subgroups. More accurate and comprehensive civil and birth registration will aid in increasing access to previously 'hidden' groups as it allow lifetime entry into social and institutional benefits. De Waal (2004) states, "our demographic and epidemiological models for the course of HIV/AIDS largely fails to take into account the systemic and structural threat posed by the collapse in adult longevity." By basing our models on the experience of each individual life, each person registered and granted true citizenship, we are enriching our understanding of actual scale of this epidemic.

Access and Equity

The benefits of anti retroviral medications (ARVs) as part of the response to the epidemic have been widely illustrated.¹¹⁹ But most of the studies have calculated costs and benefits between scenarios where either ARVs are provided or not. There is very little research examining the effectiveness of different forms of delivery. Only recently have treatment programs started examining the benefits of providing AIDS treatment in the setting of basic health care. A health security approach centered on primary health care as a vehicle of treatment delivery can help solve some of the issues of infrastructure, monitoring and compliance plaguing ARV therapy programs. The primary care setting helps not only integrate elements of testing and prevention with treatment but it also institutionalizes the intervention. The advantages of this approach are evaluated below.

¹¹⁹ Individual Members of the Faculty of Harvard University, "Consensus Statement on Antiretroviral Treatment for AIDS in Poor Countries", Topics in HIV Medicine, Vol.9 Issue 2: June, 2001 IAS-USA on HIV Insite.Com, accessed April 1, 2005. <http://hivinsite.org/InSite.jsp?page=md-04-01-13>

Of the 25 million patients infected with HIV in Africa, only around 10,000 receive HAART.¹²⁰ With the exception of some countries, in most of sub-Saharan Africa, ARVs are distributed through networks of nonprofit and international outfits. In essence, these operations have become islands of ‘excellent care’ in regions where even basic health infrastructure is lacking. Those cautious about the roll out of anti retroviral therapy ask the following question: Can these efforts be mobilized at a large scale?

Given the technical and monitoring requirements of ARV therapy, most such operations are based out of urban and academic centers which can provide the facilities. McCoy asserts that this strategy exacerbates the existing inequities. He uses the analogy of placing a roof on a house that has no walls to describe the expansion of antiretroviral therapy in regions which lack health systems infrastructure. The beneficiaries of highly technical interventions such as ARV become those who already have walls; the rich, the urban; the political elite. McCoy poses a revealing dilemma:

“Even if medicines are free, the cost of accessing treatment can be considerable. In one setting in Malawi where all public health facilities are within 6 km of the population and where care is provided free-of-charge at the point of delivery, it was found that that on average, patients spent US\$13 and lost up to 22 days work accessing a TB diagnosis. For the non-poor this was equivalent to 124% of their total monthly income. For the poor this amounted to 248% of monthly income or 584% after food expenditure.”¹²¹

Some organization such as Equity Initiatives have demonstrated the success of community based clinics which extend health workers into areas where there is little infrastructure. Can the current health care systems in the most affected countries, facing dilemmas of human resources, tackle this challenge? Even if such a mobilization was possible at the current level of investment, is it equitable to deter resources, human or

¹²⁰ *ibid*

¹²¹ David McCoy, “Health Sector Responses to HIV/AIDS and treatment access in southern Africa: Addressing Equity” Equinet Discussion Paper Number 10, Regional Network for Equity in Health in Southern Africa (EQUINET), In co-operation with Oxfam GB, October 2003. pg 14

otherwise, into interventions that focus on only a segment of the disease burden faced by local communities? Loewenson et al state, “The annual direct medical costs of AIDS (excluding antiretroviral therapy (ARV)) have been estimated at about US\$30 per capita, at a time when overall public health spending is less than US\$10 for most African countries.”¹²² Parallel training of health care professionals for HIV care alone further fragments the health care system. The ‘schemes versus systems’ analysis discussed earlier provides insight to these questions. Phyllida et al illustrate the differences between disease specific and health systems approach.¹²³ They outline four disadvantages of the disease specific approach, providing insight on the current donor HIV programming:

-duplication of bureaucracy, health workers, and facilities with increased cost of transport to the poor.

-distortions of the health care system through creation of highly specialized health workers for a specific cause in the setting of weak human resources infrastructure.

-disruptions of service through increased consumption of health professionals’ time in varied and multiple training sessions through different organizations.

-distractions during health care delivery caused by necessity to fulfill specific and uncoordinated reporting guidelines required by different donors.¹²⁴

A systems wide approach provides a greater range of policy options and the ability to tackle more than one agenda through available resources. This flexibility and

¹²²Loewenson, R., Whiteside, A., “HIV/AIDS: Implications for Poverty Reduction” A United Nations Development Programme Background Paper, for the UN General Assembly Special Session on HIV/AIDS, 25-27 June 2001, pg 9

¹²³ Phyllida Travis, Sara Bennett, Andy Haines, Tikki Pang, Zulfiqar Bhutta, Adnan A Hyder, Nancy R Pielemeier, Anne Mills, Timothy Evans “Overcoming health-systems constraints to achieve the Millennium Development Goals” Lancet 2004; 364: pg 904

¹²⁴ *ibid*

synergy can be applied not only to comprehensive HIV programming (ranging from education, counsel and testing, and treatment) but also to other health interventions which affect not the general population. Phyllida et al expand on the opportunities offered by the infrastructure approach in the table below.

Typical system constraints and possible disease-specific and health-system responses

Constraint	Disease-specific response	Health-system response
Financial inaccessibility: inability to pay, informal fees	Exemptions/reduced prices for focal diseases	Development of risk pooling strategies
Physical inaccessibility: distance to facility	Outreach for focal diseases	Reconsideration of long term plan for capital investment and siting of facilities
Inappropriately skilled staff	Continuous education and training workshops to develop skills in focal diseases	Review of basic medical and nursing training curricula to ensure that appropriate skills included in basic training
Poorly motivated staff	Financial incentives to reward delivery of particular priority services	Institution of proper performance review systems, creating greater clarity of roles and expectations regarding performance of roles, review of salary structures and promotion procedures
Weak planning and management	Continuous education and training workshops to develop skills in planning and management	Restructuring ministries of health, recruitment and development of cadre of dedicated managers
Lack of intersectoral action and partnership	Creation of special disease-focused cross-sectoral committees and task forces at national level	Building systems of local government that incorporate representatives from health, education, agriculture, and promote accountability of local governance structures to the people
Poor quality care amongst private sector providers	Training for private sector providers	Development of accreditation and regulation systems

Source: Phyllida Travis, Sara Bennett, Andy Haines, Tikki Pang, Zulfiqar Bhutta, Adnan A Hyder, Nancy R Pielemeier, Anne Mills, Timothy Evans “Overcoming health-systems constraints to achieve the Millennium Development Goals” Lancet 2004; 364: 900-06

AIDS patients require higher level and frequency of engagement with the health care system. HIV positive individuals are at higher risk for co-morbidities. They are more likely to both contract and die of common infectious diseases. These risks are compounded in the developing world where the infectious disease burden is high.

Almost two thirds of the HIV infected people in developing countries are co-infected with tuberculosis. Co-infections with hepatitis B and C are also common.¹²⁵

For patients who are on ARV therapy, side effects such as hyperlipidaemia, insulin resistance, diabetes, lactic acidosis, and pancreatitis¹²⁶ can require emergent care and chronic follow up. Enrollees in ARV therapy centers are closely followed for compliance and adverse side effects, but without a larger net of well trained multi disciplinary providers, close monitoring cannot be extended to a larger population.

On expansion, trials of compliance to treatment and resistance will become more pronounced. A low level of resistance is associated with even the most structured and adherent course of treatment. When a patient becomes resistant to a single drug, the resistance extends to that entire class of antiretroviral medications. As the virus becomes more resistant to treatment, it becomes harder to treat in each subsequent patient who contracts it. Hence, from a health security perspective, HIV treatment should be managed with view towards reducing resistance. Some ARV programs have adopted Directly Observed Treatment (DOTS) in patients on therapy, where patient compliance with medication is monitored by a health professional at each dose. However, DOTS programs focused on tuberculosis have had variable success in Africa, ranging between 37 -78% in compliance. Similarly, average rates of non-adherence for ARV therapy range between 50-70%.¹²⁷ The reasons for failure are, “Problems that have been documented include the time and expense of travel to and from health centres, availability of drugs, and the time

¹²⁵ Kitahata M., Tegger, M., Wagner, E., Holmes, K., “Comprehensive health care for people infected with HIV in developing countries.” *British Medical Journal* 2002;325: pg. 955

¹²⁶ *ibid*

¹²⁷ Bangsberg DR, Charlebois ED, Grant RM, Holodniy M, Deeks SG, Perry S, et al. High levels of adherence do not prevent accumulation of HIV drug resistance mutations. *AIDS* 2003;17: 1923-32. in *Stevens, W.; Kaye, S.; Corrah, T*, “Can widespread access to antiretroviral therapy in Africa lead to drug resistance?” *British Medical Journal*, 31 January, 2004;328:280-282

and costs needed to supervise treatment.”¹²⁸ The establishment of a network of basic health facilities will expand the scope of HIV interventions and support existing projects. Additionally, such health outposts will serve as a filter to monitor and care for those HIV positive individuals who not yet been diagnosed or treated, allowing their entry into further care.

Management of the HIV positive population requires sustained rather than episodic care, person based in addition to disease based assessment of risks, and a strategy to decrease environmental as well as systemic barriers to care. How can these principles be institutionalized? Kitahata et al propose that the WHO’s strategy to chronic diseases be adopted for HIV. The main feature of this model is the division of services at different levels of the health care system based on technical sophistication and complexity of case presentation among other features. The WHO has put forward a model for ‘Integrated Management of Adolescent and Adult Illness’ (IMAI). Among other things, the IMAI proposes the creation of clinical algorithms for the most common problems as well as guidelines for ARV therapy which can be distributed to primary care settings.¹²⁹ By focusing on the patient as the nexus of risk and vulnerability analysis, primary health care facilities will be able to tackle a larger number of sources of health insecurity. This framework will enable integration of HIV positive population into general clinical care and will solve issues such as the marginal cost of a HIV exclusive care system. As Harper (2004) advocates on the point of child mortality interventions:

¹²⁸ O’Boyle SJ, Power JJ, Ibrahim MY, Watson JP. Factors affecting patient compliance with anti-tuberculosis chemotherapy using the directly observed treatment, short-course strategy (DOTS). *Int J Tuberc Lung Dis* 2002;6: 307-12 in Stevens, W.; Kaye, S.; Corrah, T, “Can widespread access to antiretroviral therapy in Africa lead to drug resistance?” *British Medical Journal*, 31 January, 2004;328:280-282

¹²⁹ World Health Organization, “Extending Essential Care: Integrated Management of Adolescent and Adult Illness” World Health Organization Publications, WHO/CDS/STB/2003.21, Geneva 2003 http://www.who.int/hiv/pub/imai/en/extending_essential_care.pdf

'Amid the plethora of new and newly validated interventions there are signs that the child survival effort has lost its focus. For example, levels of attention and effort directed at preventing the small proportion of child deaths due to AIDS Seem to be outstripping the efforts to save millions of children every year with a few cents' worth of ITMs (insect treated materials), oral rehydration therapy, or efforts to promote breastfeeding. This must change'.¹³⁰

Turning the Handle on the Pump

Although he creates a valid argument, Harper does not highlight that the fact health care initiatives aimed at the general public will simultaneously improve the health of the HIV positive population as well. Infants with HIV in Zaire are 11 times more likely to die from persistent diarrhea.¹³¹ In South Africa, the death rate for children hospitalized with severe lower respiratory tract infections was 6.5 times higher for HIV-infected children than for their uninfected counterparts.¹³² Therefore, upstream interventions such as water and sanitation improvements discussed earlier will exponentially decrease the risks of communicable diseases in the HIV positive group. An appropriate analogy would be filling water into a bucket with a large opening at the bottom. In the absence of institutionalized solutions addressing the social determinants of health, even those on therapy will continue to dwell in environments which can undo the hard earned benefits of ARVs. Elliot et al argue the advancement of Millennium Development Goals will hinge on this philosophy.

“While antiretroviral drugs and antimalarial treatments are necessary to address the rapid spread of HIV/AIDS and urban malaria, they are only effective if they are provided in the context of robust health systems with strong and highly accessible public health infrastructures and healthy housing environments, including well-ventilated and

¹³⁰ Harper, C. “A pro-poor approach is essential to ensure equity in child health” Childhood Poverty Research and Policy Centre (CHIP) , 2004 pg 1

¹³¹ Thea DM. St Louis ME. Atido U. Kanjinga K. Kembo B. Matondo M. Tshiamala T. Kamenga C. Davachi F. Brown C. et al. A prospective study of diarrhea and HIV-1 infection among 429 Zairian infants. *New England Journal of Medicine*. December 1993, 329(23): pg. 1696-702

¹³² Madhi SA. Petersen K. Madhi A. Khoosal M. Klugman KP. Increased disease burden and antibiotic resistance of bacteria causing severe community-acquired lower respiratory tract infections in human immunodeficiency virus type 1-infected children. *Clinical Infectious Diseases*. July 2000, 31(1):pg 170-6.

sufficiently spacious dwellings provided with safe drinking water and hygienic sanitation.”¹³³

McCoy proposes striking a balance between “expansion of access to HIV treatment with the need to invest and develop healthcare infrastructure and the broader health system.”¹³⁴ This balance should not be translated as abandoning or minimizing the HIV response. It should be seen as a necessary change in strategy to further expand our efforts to combat the epidemic. De Waal asserts, “The HIV/AIDS epidemic threatens something unprecedented in modern history.”¹³⁵ Even among infectious disease emergencies, HIV is different. As opposed to an outbreak of Ebola or West Nile virus, the relatively long clinical course of HIV requires a long term and integrated plan. Rather than a single disease intervention, the nature of the virus and its propensity to increase vulnerabilities to environmental risks necessitates that we focus on ensuring health security.

¹³³ Elliott D Sclar, Pietro Garau, Gabriella Carolini, “Millennium Project: The 21st century health challenge of slums and cities” *Lancet* 2005; 365: 901-03

¹³⁴ McCoy, D., “Equity and access to HIV/AIDS treatment: getting the balance right in southern Africa” EQUINET, the Regional Network on Equity in Health in Southern Africa, *Equinet Discussion Paper No. 10*, by D. McCoy, October 2003, pg 27

¹³⁵ de Waal, Alex, “HIV/AIDS: The Security Issue of A Lifetime” Chapter 8 in Global Health Challenges for Human Security, 2004.

VII. Discussion

“Compromise makes a good umbrella, but a poor roof.”
-James Russell Lowell (1819–1891)¹³⁶

In his expansion of the ideals discussed in the 1994 UNDP report, Haq underscores the connection between governance and human security.¹³⁷ He argues that human security is the podium through which citizens of the world can ask difficult questions of national governments and international bodies. Here is a medium which affords child vaccination and military spending equal footing. Here the futility of pursuing security of nations without ensuring security of people is revealed. In the litany of familiar questions (Security from what? Security for whom?), the unasked and presumed premise is: Security from whom? In other words, who ensures security? Governing institutions can both enable and encumber human security. The process of development continues to be compromised due to lack of good governance in the workings of national governments and the policies undertaken by international actors. The long term and structural view is abandoned too often on the premise of bad governance. Human security has provided a lever which can help realign priorities to focus on what is best and not just what is possible.

¹³⁶ James Russell Lowell (1819–1891), U.S. poet, editor. speech, Oct. 6, 1884, Birmingham, England. “On Democracy,” published in *Democracy and Other Addresses* (1886), quoted from The Columbia World of Quotations. Columbia University Press, New York, 1996. accessed on Bartleby.Com, <http://www.bartleby.com/66/95/36895.html>

¹³⁷ Haq, M. “Human Rights Security and Governance” *Journal of the Toda Institute for Global Peace and Policy Research: Dialogue of Civilizations for World Citizenship*, The Toda Institute, Vol 3, No 2, Winter 1998. accessed April 3, 2005, <http://www.toda.org/Default.aspx?PageID=48>

“Isn’t it time to ask?”¹³⁸

Citizenship is the basic contract between governments and their constituency defined by rights and duties. The health security argument turns the ‘right to health’ discussion on its head by equating individual health with national well being. It is in the best interest of nations to promote good health. Good governance, Secretary General Kofi Anan argues, “...involves promoting the rule of law, tolerance of minority and opposition groups, transparent political processes, an independent judiciary, an impartial police force, a military that is strictly subject to civilian control. A free press and vibrant civil society institutions, as well as meaningful elections. Above all, good governance means respect for human rights.” When plotted against the efficacy of public spending, bad governance has a negative impact on outcome per dollar spent.¹³⁹ Corruption has been shown to have a negative linear relationship to infant mortality.¹⁴⁰ The quagmire is ubiquitous. To promote equity in health promotion and delivery, the role of local and national government is integral. The impetus lies in taking on the challenge of promoting good governance rather than programming around it. Donors must recognize and pursue this responsibility. In turn, they too must avoid funding based on marketable results rather than infrastructure solutions.

Local and international non profit organizations serve as channels for advocacy.

These actors should use the human security perspective to reframe international health

¹³⁸ Haq *ibid*

¹³⁹ Rajkumar, AS, Swaroop, V, “Public Spending and Outcomes: Does Governance Matter?”, Public Policy Institute, Georgetown University and Development Research Group, World Bank, May 2002, pg. 5 accessed March 20, 2005. www.worldbank.org/research/growth/pdfiles/swaroop.pdf

¹⁴⁰ Gupta, S., M. Verhoeven, and E. Tiongson. 1999. “Does Higher Government Spending Buy Better Results in Education and Health Care?” Working Paper 99/21. International Monetary Fund, Washington, D.C.

matters as local security issues. Advocacy is central to mobilizing funds and resources particularly in the health field, where international regulations on intellectual property and trade continue to place barriers to medication access. At the writing of this paper, the government of India, one of the major suppliers of antiretroviral drugs to the developing world, has been forced by trade agreements to revise its patent laws. By some estimates, the price of new medications could increase by a mean of 200%.¹⁴¹ The agreement between World Trade Organization members in 2003 allows countries to employ compulsory parallel licensing for certain patented medications in situations where governments have declared a national public health emergency.¹⁴² Under these requirements, new generation antibiotics or advanced efficacy medications for non-communicable diseases would not qualify for exemption. This kind of conditionality places a ceiling on the course of developing countries towards proactive health security policies and primary health care.

Better research is needed on efficacy of primary care and on social determinants of health. In March 2005, Lee Jong-Wook, Director General of the WHO announced the formation of the Commission on Social Determinants of Health which, “will leverage change in policy and institutional practice by turning existing knowledge on social determinants into actionable global, regional and national policy agendas.” The Commission’s strategy includes the development of a knowledge network which compiles research and best practices. The Commission will also aid in incorporation of

¹⁴¹ Medicins San Frontiere, “Will the lifeline of affordable medicines for poor countries be cut?” Campaign For Access to Essential Medicines, 2/25/05, <http://www.msf.org/countries/page.cfm?articleid=892A769B-692B-47E4-B7E1C1C20A510F1E>

¹⁴² Matthews, D. “WTO decision on implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health: a solution to the access to essential medicines problem?” *Journal of International Economic Law* 2004 7(1):73-107, Abstract

this information and philosophy into the working of UN agencies, while advocating similar change at the country level. This initiative is promising and should be defined in the context of health security.

VII. Conclusion

The field of human security offers a new perspective on issues of development. By expanding the definition of what constitutes a threat, it provides new urgency to important goals. To date, the theory remains difficult to operationalize. The creation of a set of principles for human security programming, aid in not only prioritizing pursuant issues but also pinion the concept of human security. Applied to the pursuit of health security, these principles translate to a guarantee of protection from avoidable mortality and morbidity. Solutions should be sought in existing vulnerabilities of communities and infrastructures rather than just the physiology and epidemiology of diseases. Shifting the focus from disease based to systems based approach will allow our responses to integrative, proactive and constant. Such interventions are supportive of and critical to a comprehensive and long term management of the HIV/AIDS epidemic in the developing world.

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