

LESSON 5 Global Pandemics

Abstract

Given the evolution of global infectious diseases and the interconnectedness of the international system, there is a risk of global pandemics. Extraordinary economic losses (border closing and quarantines) would occur. Health issues take pride of place in the Millennium Development Goals (MDGs) and the Copenhagen Consensus. There is a demonstrated relationship between health status and macro economic performance. The aging of the OECD population is among the factors that have led to the perverse migration of health workers. There is a need to “scale-up” well understood low cost interventions. R&D investments are skewed to those who need it least. The mushrooming of ambitious initiatives, each with its own way of doing business, has led to calls for "harmonization", and greater coordination across the many actors.

Background

Health and the risk of global pandemics is worth attention at the highest levels. Contrary to expectation, the life expectancy gap between the richest and the poorest nations had widened dramatically following the end of the Cold War. Today the gap between the society with the greatest life expectancy (Japan) and the shortest (Zimbabwe, Sierra Leone and a short list of African countries) is nearly fifty years. More people died of tuberculosis, malaria and HIV in 2003 than in any year in history, despite some well publicized international funding drives

The Copenhagen Consensus process (see reference below) identified "best buys" in global development - six of the top 13 were in areas of diseases and malnutrition. Health is considered a special “good”, both intrinsically and instrumentally. Health is a prerequisite for economic growth. There is also a security dimension in terms of a collective sense of vulnerability to epidemic diseases.

Despite the overall progress in global health there are some countries where health has not improved at the same rate as the global averages and/or where despite initial progress, there are now trends towards declines in health status (e.g. countries of the former Soviet Union and Africa). In African and Asia, we are unlikely to meet the health related MDGs.

The health-related MDGs draw attention to critical health challenges which disproportionately affect Africa. The risk of dying in pregnancy and childbirth is 100 to 1,000 times more likely for an African woman compared to a woman from an OECD country. Almost 20% of all children born in Africa die before reaching their fifth birthday, with corresponding risks of 10% in South Asia, 4% in Latin America and less than 1% in industrialized countries. The triad of HIV/AIDS, malaria and tuberculosis infections and fatalities are similarly disproportionately found in Africa. Control of HIV/AIDS represents both the largest health and development challenge globally.

The ease of travel and the forces of migration, commercialization and urbanization have created what some have called the conditions for "microbial unification". An infectious pathogen in one part of the world can now find its way to multiple global destinations with large populations in less than 24 hours. The SARS epidemic in 2003 seemingly effortlessly established itself as a major threat to all public health systems in the world in several weeks. Immigrant populations coming from countries with high TB prevalence account for two thirds of the cases of Tuberculosis in the United States. Global production and distribution channels of food are seen to spread widely the health risks associated with differential standards of preparation and preservation.

Globally, the growth of the health care sector has consistently exceeded the rate of growth of GDP in OECD countries over the last 50 years. There are a number of factors underlying the extraordinary growth of the health sector relating to issues such as technological capability, consumer demand and aging populations as well as the relationship of the health sector as a whole to other sectors of the economy. One implication has been acceleration in "health worker migration" -- the flow of skilled health personnel -- from poorer to richer health economies. Health care workers are leaving at increasing rates accentuating the already deadly shortfalls in the national workforce. The likelihood of sustained growth and unmet labour needs in OECD health economies suggests health worker migration will continue to grow in the long term.

In 2002, the WHO released the report of the Commission on Macroeconomics and Health. The report argued that much larger national and donor investments in health are merited especially in least developed countries. At present very few poor countries are spending on health at a level that corresponds with health need. To do so would require massively expanding health spending. The expansion of public sector spending on health, however, is limited by fiscal guidelines relating public spending to the size of the economy. Public sector budget guidelines, managed by the IMF, are not sensitive to the specific sectoral needs of health.

There is a need to "scale-up" interventions that work -to take proven, low-cost, life-saving interventions from unacceptably low population coverage and dramatically expand this coverage to a more satisfactory level. The opportunity to improve health is not constrained by an absence of technology. The challenge in low income countries is primarily about how to apply what we know works: there has been a growing awareness of the extent to which systems (or lack thereof) constitute the primary barriers to progress. Several factors prevent health improving low cost interventions to be made more widely available. The factors include shortages of health workers, the absence of reliable supply chains for diagnostics and drugs, and impoverishing financing systems. Despite increased donor financial resources, the knowledge and know-how to overcome these constraints and barriers is in short supply.

A myriad of products has emerged from large investments in R&D, both public and private. From a global perspective, new technologies are skewed towards the needs of the populations with significant purchasing power. It is said only 10% of research globally is targeted towards the needs of 90% of populations living in poor countries. This skew has

catalyzed a set of innovative partnerships that aim to develop new vaccines and drugs for AIDS, TB, malaria and other conditions. There is growing awareness of the regulations and trade agreements that govern access to these technologies. The DOHA round of the WTO includes a focus on trade related intellectual property and compulsory licensing. The global ground rules for trade can impact the health sector either directly through trade in health services, flows of health workers, and access to medicines, or indirectly, through exposure to environmental and consumption risks.

There has been an impressive expansion of financing and new actors including NGOs and philanthropic foundations engaged in the health problems of poor countries. Inadequate coordination within the overall health sector has led to chaotic and often duplicative approaches. There has been a mushrooming of ambitious initiatives each with its own coordinating mechanisms and ways of doing business, creating conditions that are akin to a "perfect storm", from the perspective of a Health Department in a poor country. This realization has led to renewed calls for help under the banner of "harmonization", and greater coordination on strategy, financing, monitoring and evaluation of health and development assistance.

The argument for L20 involvement is that authorities are generally unprepared with respect to global pandemics-- there are huge gaps in what should be a seamless web of surveillance activities; vaccine stocks are inadequate; and there are drastic medical personnel shortages. Insufficient bridges exist between public health and agricultural veterinarian personnel. Institutional barriers between them need to be removed, and agricultural veterinarians must be included in an upgraded early warning system. Only Leaders could jolt the system into building these bridges and pooling efforts. Leaders must catalyze action across health, agriculture, trade and finance ministries domestically and across the WHO, FAO, WTO and the Bretton Woods institutions internationally. Leaders' attention is justified given the dimensions of the under appreciated threat, the inadequate infrastructure and response capacity, and the risk of very high personal and economic loss (border closings and quarantines).

Lesson Plan

Students should begin with a review of the WHO. Then scan the Copenhagen Consensus sections on disease and on malnutrition.

Read the background paper by Tim Evans, Assistant Director General (Evidence & Information for Policy) at the World Health Organization. Watch the video produced by Evans which presents the case for the L20 Agenda including the topic of infectious diseases.

<http://www.l20.org/publications/3-Health.mov>

Discuss the argument for L20 involvement - that the infectious disease challenges are often multiple (Flu pandemic, SARS, HIV/AIDS, TB, Hepatitis) and multidimensional (e.g., the need to consider factors such as poverty, deprivation, disempowerment, gender inequality and access to health services). Review the contentions that there are gaps in surveillance activities, inadequate vaccine stocks, and shortages in medical personnel.

Discuss the premise that the world does not have an adequate infrastructure and response capacity. Review the contention that insufficient bridges exist between public health and agricultural veterinarian personnel.

Review the various ideas, actions and initiatives that could be part of an L20 endorsed package or “grand bargain”:

- *Enhance Support for WHO’s Global Outbreak Alert and Response Network*
(<http://www.who.int/csr/outbreaknetwork/en/>)
- *Assessment of Country-Level Implementation of Global Health Security Measures*
Periodic country-level peer review assessments to produce non-binding, confidential recommendations to governments on needed country-level improvements in implementation of global health security measures.
- *Globalizing the Global HIV Vaccine Enterprise*
(<http://www.whitehouse.gov/news/releases/2004/06/20040610-30.html>)
- *Working Group on Trade and Global Health*
Establish a WTO Working Group with the mandate to provide a forum for L20 countries to assess concerns and foster opportunities created by international trade agreements and dispute settlement decisions.
- *Trade Incentives*
Task our trade and health ministers to collaborate with the WTO and WHO to create trade incentives that accrue to those developing countries that significantly and verifiably improve child and maternal health. Instruct our trade and health ministries to assess the effect of existing trade barriers on health-related products, technologies, or services in order to identify barriers that countries can reduce or eliminate without compromising health protection.
- *Global Health Workforce Summit*

- Instruct our health ministers, with the participation of the ILO, to organize Global Health Workforce Summit, to produce a strategic framework to redress what is becoming an unsustainable shift of skilled health care professionals from developing to developed countries.)
- *Accelerate Influenza Vaccine Development and Supply*
Establish an L20 foreign minister level Influenza Task Force to accelerate the global agenda on influenza vaccine development and supply challenges.)
 - *Create a Global Health e-Library*
Create the portal of choice for accessing cutting-edge scientific and public health information.
 - *Action Against Antimicrobial Resistance*
Mandate Health ministers to develop and implement action plans to correct identified problems.
 - *Create a market for R&D in Vaccines for neglected diseases.*
Ruth Levine has proposed a scheme whereby donors would make a legally binding commitment, in advance, to contribute most of the cost of buying a vaccine, at a guaranteed price, if it were developed. This certain “market” would provide an incentive for firms to invest in the development of these vaccines.
 - *Global Health Horizons Enterprise*
Create a Global Health Horizons Enterprise, where leading thinkers on the sciences, health, information technologies, social activism, and globalization are brought together to discuss probable and possible horizons for global health, tasked to provide actionable policy recommendations for L20 countries.

For any initiative, anticipate the position of the pharmaceutical industry, business interests in general, as well as the range of civil society organizations involved.

Discuss the question whether it would be constructive to reframe the global health/infectious diseases proposition as protection against bio terrorism. Some proponents argue that many of the initiatives to improve public health capacity in general are congruent with enhanced capacity to counter bio terrorism; the advantage being that the US will be more interested in a Security frame.

Discussion Questions

1. See the “Opponents” notes at:

<http://www.copenhagenconsensus.com/Default.aspx?ID=220>

Question: Are existing institutions likely to respond to future challenges? What is the best case that can be made to argue that new vehicles or institutions would be counter productive?

2. In October 2005, the Canadian Health Minister hosted a meeting of Health Ministers from 30 countries, and officials from key organizations such as WHO and FAO to discuss world preparedness.

http://www.hc-sc.gc.ca/ahc-asc/intactiv/pandem-flu/index_e.html

Question: Were the right countries and organizations present? Could more be expected from Leaders than Ministers of Health?

3. Many believe that avian flu is an example of an under appreciated threat characterized by inadequate infrastructure and response capacity, and the risk of very high personal and economic loss (border closings and quarantines).

Question: Is Avian Flu a safe issue for a first L-20 meeting? Can a package of potential initiatives be devised that will be attractive to each of the potential L20 countries?

4. The security prism could be an effective way to garner US support. Huang Yanzhong (http://www.l20.org/publications/Phase%20II/Health/health_huang.pdf) has argued that the use of a bioterrorism frame may accomplish the same goals as an infectious disease frame, and could be implemented as a re-packaging of monitoring and surveillance initiatives (i.e. the frame is benign and will be used to accomplish the same goals of improving health, regardless of how it is packaged).

Question: Could the bioterrorism frame secure US support? Is an initiative to establish and maintain a bioterrorism surveillance system congruent with the investment needed to effectively monitor disease outbreaks globally?

Recommended web-based References

Evans, Drager, Pablos-Mendez and Cassels, “*L-20 and Global Public Health*”
http://www.l20.org/publications/Phase%20II/Health/health_background.pdf

Copenhagen Consensus
<http://www.copenhagenconsensus.com/Default.aspx?ID=699>

WHO, Commission on Macroeconomics and Health
<http://www.cid.harvard.edu/archive/cmh/>

Levine, Ruth
http://www.l20.org/publications/Phase%20II/Health/health_levine_AdvancedMarkets.pdf

Yanzhong Huang, Building A Global Bio-Defense Shield
http://www.l20.org/publications/Phase%20II/Health/health_huang.pdf

Garrett, Laurie
Leaders Summit on Global Infectious Disease: Toward an L20
<http://www.l20.org/publications/Phase%20III/Pandemics/geneva.garrett.pdf>

Global Health Security Initiative
Sixth Ministerial Meeting on Health Security and Bioterrorism
Rome, November 18, 2005
<http://www.g8.utoronto.ca/health/rome2005.html>