Europe is in danger of lagging behind, according to Zsuzsanna Jakab, Director of the European Centre for Disease Prevention and Control (Stockholm, Sweden). In an interview with the UK *Financial Times*, she stated that it would take at least two more years to be adequately prepared for a pandemic within the EU (Jack, 2007). Jakab was referring specifically to a report from her organization that called for stronger coordination across both government departments and country borders, rather than a focus just on public health programmes on a state-by-state basis (Influenza Team, 2007). Although the EU and national governments have increased their efforts and invested more money over the past year, she pointed out that not a single member country has yet published a pandemic response plan spanning all government departments. The need is not so much for additional investment within healthcare, such as ICU facilities, but for full-scale logistical preparation across all relevant sectors.

For too long, preparedness strategies for public-health emergencies have been neglected, and communities remain ill-equipped to face a sudden epidemic, let alone a global pandemic. Perhaps the looming spectre of a potentially devastating H5N1 pandemic will kill off this false sense of security, and concentrate the minds and budgets of both governments and research communities towards preventing another superbug scourge.

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Bioethics goes global

A growing coalition of scientists, ethicists and wealthy benefactors is turning its attention to global health problems

Peter A. Singer was director of the Joint Centre for Bioethics at the University of Toronto, Canada, and had run a standard bioethics programme for a decade before he felt that something was missing. “We did typical stuff, very worthwhile for local patients and local communities: improving end-of-life care, focusing on research ethics, and looking at issues of consent, genetics and ethics,” he said. But he was becoming increasingly concerned about the health crises in the developing world. “Life expectancies in industrialized countries are 80 years and rising; in many developing countries, they are 40 years and falling, largely as a result of HIV/AIDS,” he explained. Last June, Singer underwent a career—and paradigm—change: from thinking and acting locally to working on global health. Disparities in global health “are surely among the most significant ethical challenges in the world and I wanted to spend more of my time working on them,” he said.

There are many more—and much larger—players taking up the challenge of resolving global health inequities. Computer software billionaire Bill Gates and investor Warren Buffett are funneling billions of dollars through the Bill & Melinda Gates Foundation (Seattle, WA, USA). Gates, who has taken on the mantle of humanitarian with the same drive that he used to build his software empire, addressed the World Health Assembly in Geneva, Switzerland, in 2005: “The world is failing billions of people. Rich governments are not fighting some of the world’s most deadly diseases because rich countries don’t have them. The private sector is not developing vaccines and medicines for these diseases, because developing countries can’t buy them. [...] If these epidemics were raging in the developed world, people with resources would see the suffering and insist that we stop it. But sometimes it seems that the rich world can’t even see the developing world. We rarely make eye contact with the people who are

suffering—so we act sometimes as if the people don’t exist and the suffering isn’t happening” (Gates, 2005).

Like Gates, Buffett and Singer—now a senior scientist at the McLaughlin–Rotman Centre for Global Health in Toronto—an increasing number of ethicists, economists, politicians, philanthropists, non-governmental organizations and others are expanding their focus and setting out to tackle the manifold problems of public health in a global context, particularly in the developing world. However, as much as this growing interest and funding is welcome, critics have challenged the use and distribution of resources.

Recently, Timothy Christie, Director of Ethics Services for Atlantic Health Sciences Corporation, a regional health authority in New Brunswick, Canada, raised questions about the levels of funding for HIV/AIDS care in the developing world compared with those for victims of other diseases and disasters, after the December 2004 Sumatra–Andaman earthquake and tsunami, which killed hundreds of thousands of people in Southeast Asia (Christie *et al*, 2007).

...these crass differences in helping victims of diseases or catastrophes could be regarded as unjust: does a tsunami victim really need much more financial support than an AIDS patient in Africa?

“Within a week of the tsunami, countries were competing with each other to see who could give the most money. Then [aid groups] said, ‘We have to stop taking donations for tsunami relief because we’ve got too much money.’ I thought that was remarkable,” Christie explained, which is why he and his colleagues became interested in analysing disease and disaster relief

funding. "It demonstrated to me that the international community can solve problems if it so desires. Then it made me wonder why other things such as HIV—which I was working on at the time—haven't received the same attention."

In reality, it seems that whatever captures media headlines raises the interests of people in developed countries and thus attracts relief money

Their analysis—presented at the 2006 International AIDS Conference in Toronto, Canada—found huge gaps in aid spending: US\$33.9 million per death from Hurricane Katrina, which devastated the US Gulf Coast in 2005; US\$22.4 million per death from the avian flu, 2003–2006; US\$35,336 per death from the Asian tsunami in December, 2004; US\$2,483 per death in the Pakistan earthquake of October 2005; US\$1,968 per HIV/AIDS death in 2004; and US\$29 per person killed in the civil war in the Democratic Republic of the Congo in 1998–2004.

"What happened in Southeast Asia was basically unpreventable. [...] Meanwhile, HIV/AIDS is an appalling example of a largely preventable disease with proven effective interventions. Responses to HIV/AIDS and the tsunami are examples of our inconsistency in responding to large-scale human tragedies. Regarding HIV/AIDS, we shrink behind rationalizations and fallacious reasoning, whereas in the case of the tsunami we simply did what needed to be done out of genuine empathy," Christie commented. "Does the way the international community responds to devastating diseases and disasters make any sense at all?" he asked. "For the life of me, I can't see it."

Indeed, these crass differences in helping victims of diseases or catastrophes could be regarded as unjust: does a tsunami victim really need much more financial support than an AIDS patient in Africa? In reality, it seems that whatever captures media headlines raises the interests of people in developed countries and thus attracts relief money. Christie and colleagues therefore called for more fairness in distributing resources to victims of devastation and disease. "The idea is that justice is simply

the principle that equal should be treated equally, and unequals should be treated unequally," he said. "If you want to give differential treatment to equals, there's got to be a relevant reason."

Udo Schuklenk, designated research chair in bioethics and public policy at Queen's University in Kingston, Canada, and co-editor of the journal *Developing World Bioethics*, commented that Christie and colleagues' published research is an important contribution to the debate over inequitable spending. "If we agree that all human lives are of equal value, one would have reason to be suspicious that in order to save lives in different manners, depending on the threat to your life and the [attractiveness to the media] of it, different amounts of resources are deployed," he said. "That's an important ethical issue."

Singer, who is on the scientific advisory board of the Gates Foundation's Grand Challenges in Global Health Initiative, believes that the research "[is] provocative, and I hope that it gets people in development agencies thinking," as it highlights the extent of the problem of global health. "When I saw [the article], I started calculating the 3.1 million AIDS deaths [they] talk about per year, in terms of jumbo jet crashes. That [is] equivalent to 20 jumbo jets falling out of the sky every day. In fact, if there were 20 jumbo jets falling out of the sky every day, we would certainly be motivated to do something. I think sometimes putting it in these terms or comparing tsunami dollars with HIV/AIDS funding dollars is a very useful way of stimulating debate," he said.

However, Stuart Rennie, a bioethicist at the University of North Carolina (Chapel Hill, USA), who has worked extensively in the Democratic Republic of Congo, found the analysis lacking. "[Christie et al] only use a formal principle of justice, a well-known formal principle of treating like cases alike," he said. "Most people, not just professional ethicists, will agree with that principle in the abstract. But to use the principle in an ethical analysis, you have to demonstrate that the cases you are comparing really are alike in the relevant respects." Rennie added that the comparison between the Asian tsunami and the African HIV/AIDS epidemic was too simplified to justify applying principles of equal justice: "There are many ways in which the two situations differ, and the only way I can figure out they're alike is that many people died."

Laurie Garrett described the declining state of national and global public health as early as 2000, in her book *Betrayal of Trust: The Collapse of Global Public Health* (Garrett, 2000). A senior fellow at the Council on Foreign Relations, an independent non-partisan organization in New York (NY, USA), she also feels that one should be careful when making such comparisons. "I don't think that playing the game, pitting one disastrous occurrence of humanity against another, is a smart way to go," she said, although she expressed her belief that not enough is spent on tackling HIV/AIDS in the developing world.

Garrett has been quite critical of how funds for global public health are spent. In an article in *Foreign Affairs* (Garrett, 2007), she warned: "Beware what you wish for." Indeed, private and public sources are now providing unexpected and unprecedented riches to tackle global health problems—sums that would have been unheard of less than a decade ago. But although the influx of money is certainly a good sign, its use is not always efficient.

"The whole way we have approached the relationship between the wealthy world, which is an ever-shrinking percentage of the global population, and the poor world, which is an expanding percentage of the population, in terms of some notion of a duty on the part of the wealthy world to care for the needs of the poor, has been very, very emotionally and celebrity- and politically driven," she explained. "[But] we have no rational coordination of all the alleged do-gooders, whether they're government, private or non-governmental organizations. They're not coordinating in any way. There are no commonly shared targets other than the Millennium Development Goals, which are sort of dream targets that don't really result in concrete ways to implement anything, for the most part."

What is needed ... is a strategic plan to distribute funds and highlight areas where the biggest impact can be achieved

In essence, she said, these efforts represent "chaotic do-gooder-ism" that can do more harm than good. What is needed, instead, is a strategic plan to distribute funds and highlight areas where the biggest impact can be

achieved. In her article, Garrett argued that "[i]nstead of setting a hodgepodge of targets aimed at fighting single diseases, the world health community should focus on achieving two basic goals: increased maternal survival and increased overall life expectancy. Why? Because if these two markers rise, it means a population's other health problems are also improving. And if these two markers do not rise, improvements in disease-specific areas will ultimately mean little for a population's general health and well-being."

Garrett said that the Organisation for Economic Co-operation and Development (OECD; Paris, France) and major industrialized nations should recognize that vanquishing AIDS, tuberculosis and malaria are not only tasks in themselves but also essential components of these two larger goals. Accordingly, she argued, US Congress and its counterparts in Europe and Canada should recognize that targeted funding for HIV/AIDS could do more harm than good by "robbing local health-care workers from pediatric and general health programmes". In addition to the traditional brain-drain to the developed world, higher salaries for health workers in programmes sponsored by Western non-government organizations and OECD-supported programmes could cause a brain drain from broader local government-run public health efforts.

Shuklenk agrees with Garrett's message, but warns of easy solutions. On the basis of his five-year experience building a bioethics research and training programme at the University of the Witwatersrand in Johannesburg, South Africa, he said, "If you pour a lot of money into training staff for HIV/AIDS and salaries are higher because of private funding, then workers will come from other areas, whether it's paediatrics or geriatrics, and go into HIV/AIDS work because that's where the careers and money are. [...] The only thing you have to ask yourself is whether you are deploying the money in ways that are most beneficial to the societies in question. What strikes me

is that current strategies look at particular points and not the bigger picture. We need to find out how we can treat as many people as possible."

Global health problems can only be solved if enough people become aware of the problem ... and if enough work is done to resolve inequities in the world

Michael Selgelid, a bioethicist at the Australian National University in Canberra who has castigated bioethics for ignoring infectious diseases as an important problem (Selgelid, 2005, 2007), commented that Garrett's concerns are warranted. But even if available funds were spent more efficiently, more support for global health is still needed from wealthy countries. Ultimately, citizens in these parts of the world must become—or be made—more aware of the problem and its implications. "[T]here are many reasons for spending more to improve health in poor countries. [...] And a lot of them are self-interested reasons," Selgelid said. Among these are promoting securities globally and within developed countries; advancing the economic interests of developed countries; reducing the threat of infectious diseases to developed countries; and amending global injustices that developed countries have themselves benefited from and contributed to. "It seems to me that if ordinary voters were aware of all the reasons that there are, and the self-interested ones in particular, and were better aware of the extent of the problem and the fact that fixing it wouldn't cost that much, then they would support public policies that involve spending more on public health," he said.

Strangely enough, bioethics originally meant a philosophy integrating biology, ecology, medicine and human values—and therefore encompassed a more global approach—when Van Rensselaer Potter II, an oncologist at the University of

Wisconsin-Madison (USA), coined the term in 1970. Indeed, bioethics first tackled global issues, such as global healthcare and public health, but quickly moved toward ethical problems that affect individuals, such as matters of consent or who should receive an organ transplant.

The pendulum is now swinging back to the global side. But it needs more than the commitment of ethicists or philanthropists, even if they are as wealthy as Gates. Global health problems can only be solved if enough people become aware of the problem, as Selgelid pointed out, and if enough work is done to resolve inequities in the world. "Until my young kids, who are 16, 12 and 10, feel some sense of solidarity with people who are 16, 12 and 10 living outside of Kampala, Uganda, [...] our real commitment to these inequities may not happen," Singer said. "My kids are worried about their homework and how they're going to get to their dance lessons. For people living outside an African city in Rwanda or Uganda, the main concern is food and health. Until we develop a sense of solidarity between those sets of kids, we are going to continue to have the mother of all ethical challenges."

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