

Confronting Global Inequities in Health Care

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Work carried out in the past decade has underscored the extent of global inequities in health care. The Commission on Health Research for Development noted that 90% of global research expenditures in health care are dedicated to the problems of 10% of the world's population. Life expectancy in many developed countries is 80 years and rising; in some sub-Saharan African countries it is 40 years and falling. These inequities in global health are major ethical challenges in the world today. The distinguished Canadian medical scholar, John Evans, underscored this point in his 2001 Killam Lecture, noting that the Public Research Contract "should encompass a global vision not just to interact with research leaders in the industrialized countries, but also to establish research partnerships to assist less prosperous societies resolve problems impeding their development."

Genome-related biotechnology might well be harnessed to address these inequities. Polymerase Chain Reaction (PCR), microarrays, bioinformatics, pharmacogenomics, and proteomics are especially promising in this regard. While many Canadians may not know it, there is a revolution underway in medicine and geneticists are leading the charge. Medical genetics, once a tool for diagnosing a handful of relatively rare diseases inherited from a parent, has rapidly expanded into new territories – the prediction of a healthy person's risk of developing even common diseases such as cancer and cardiovascular disease; the analysis of patterns of gene expression as a complement to conventional diagnostic methods; and the evaluation of multigenic diseases and responses to environmental agents and drugs. Further, knowledge about the genomes of microbes is rapidly expanding the opportunities for diagnosing, preventing, and treating infectious diseases – a potential boon to developing countries.

By far the most revolutionary development, however, has been the work of the Human Genome Project (HGP). Knowledge gleaned from the HGP is making it possible to identify individuals at risk for disease, to diagnose and treat disease in ways that until recently were not possible, and to improve health through early diagnosis, health promotion activities, more targeted treatments and increased understanding of prevention. It is fair to say that biology in the post-HGP age has become an information science with the potential to transform human understanding in ways that were heretofore unimagined.

All of this should mean better health outcomes for all people, not simply those lucky enough to have been born in the Northern Hemisphere. It should also mean exciting new forms of economic activity as knowledge is translated from the university lab into biopharmaceutical companies. Still, the "disease gap" separating rich and poor countries not only persists, it's widening. Of the nearly 30 million people who die every year from cardiovascular disease, 80% are in low and middle income countries; 1300 children die every day from HIV and AIDS-related diseases, most in sub-Saharan Africa; and Tuberculosis is the world's #1 infectious disease, claiming 3 million lives every year – again, in predominantly low income countries.

Wade Davies, Explorer-in-Residence at the National Geographic Society, has argued that true peace and security for the 21st century will only emerge when society finds "a way to address the underlying issues of disparity, dislocation and dispossession that have provoked the madness of our age." While genetic and genomic technologies are by no means a panacea for all that ails us as a society, it seems clear that the developed world must ask itself several questions about inequities in health that contribute to disparity, dislocation and dispossession:

- Why are genetic and genomic technologies (and other medical diagnostics and therapeutics) not made available to developing countries?

- What are the conditions that would have to be created in the developing world to make it more attractive or receptive for investment by the developed world?
- What is the nature of the paradigm shift that must take place in the developed world to meaningfully respond to global inequities in health care?

While it is heartening to see the Gates Foundation and other organizations taking both a stand and action internationally, we need deeper, sustained, systemic change in the way we think about the health and welfare of people – regardless of where they

live. A key plank in such a change effort is the mobilization of diagnostics and therapeutics, including genetic and genomic technologies, to low and middle-income countries.

If it true that you can tell a good deal about a community by the way it treats its less fortunate souls, what does our current approach to global health say about us?

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