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## DEVELOPMENT, GLOBAL CHANGE AND THE EPIDEMIOLOGICAL ENVIRONMENT

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Although improvements in human health represent a crucial aspect of development worldwide, many trends associated with development and global change appear to be reducing health security. In this article, the human epidemiological environment has been defined and key biophysical, economic, socio-cultural and political factors that shape it have been described. The potential impact upon the epidemiological environment of aspects of both development and global change are then examined: the influences of human population size, mobility, geographic distribution and nutritional status; modernization; loss of indigenous medicinal knowledge; microbial evolution of antibiotic resistance; land conversion and biodiversity loss; agricultural intensification; stratospheric ozone depletion and climate change. Human vulnerability to infectious disease is often strongly and deleteriously influenced by ongoing, intensifying changes in these factors. An unprecedented level of communication and cooperation between experts, institutions and nations is required to respond to the increasing threat of epidemic disease, which points to a promising area for enhanced interdisciplinary collaboration.

The paper recommends the following as urgent steps to be taken on the front line to improve the human epidemiological situation;

Reduction of the population to an optimum size, establishment of early warning networks and expert response teams to improve the chances of early detection, development of global strategies of highly targeted and minimal antibiotic and pesticide use and the imposition of moratoria to slow the development of resistant strains of pathogens, application of integrated pest management, worldwide campaigns on education and awareness of the importance of personnel and community hygiene in preventing disease, provision of international aid for upgrading the facilities of homes, hospitals of poor nations in order to screen the pathogens effectively. While taking the necessary steps to improve the epidemiological environment it is essential that equity of opportunity between sexes, races, religions and nations be increased which is of vital interest to both rich and the poor.