

Global Public Health: Progress and Challenges

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EXTENDED ABSTRACT

As the world continues towards economic interdependency with extensive international travel, migration of workers, and reliance on labor forces worldwide, global public health issues are increasing in significance for both the developing and developed world. Most global health problems are associated with extreme poverty, lack of education, and lack of sanitation and clean water. Thus, in 2000, the United Nations established a set of Millennium Development Goals, to be met by 2015, which address extreme poverty, hunger, primary education, gender equality, child mortality, maternal health, infectious diseases (i.e. HIV/AIDS, Malaria, and Tuberculosis), environmental sustainability, and global partnerships for development.

At the midpoint in 2007-2008 for achieving these goals it is important to assess the progress which has been made and the challenges faced so that effective efforts can be reinforced and new approaches to the challenges may be developed. At this midpoint extreme poverty and associated hunger decreased from about 1/3 of the world population to 1/5 a trend which will meet the 2015 goals. However, although the extreme poverty rate in Sub-Saharan Africa has declined a few percentage points during this period the rate of decline will fail to meet the goals unless progress is accelerated. Child mortality has declined significantly due to life-saving interventions such as immunizations. This decline is worldwide although the rate of decline is smaller in Sub-Saharan Africa and Western Asia and will likely not meet the 2015 goals. In Sub-Saharan Africa the under age five mortality rate remains 166 per 1,000 births, double that of the developing world in general. Maternal health and births with skilled attendants are increasing, from 43% in

1990 to 57% in 2005 overall developing world. Considerable progress in this regard has been made in Eastern and South-Eastern Asia and North Africa.

However in Sub-Saharan Africa and Western Asia progress has been slow and in the Commonwealth of Independent State the percentage of births with skilled attendants has declined over this period. Epidemics of infectious diseases, including HIV/AIDS, Malaria, and Tuberculosis are leveling off throughout the world. However, numbers of cases continue to increase. Availability of bed nets to prevent Malaria is particularly lacking for children in rural areas of Sub-Saharan Africa. Deaths from AIDS rose to 2.9 million in 2006, mainly in Sub-Saharan Africa. However, access to antiretroviral therapy has increased in this area to that of the average of the developing regions (28%). Access to these drugs is very low in Oceania (10%) and Southern Asia (9%).

As discussed above, progress is definitely being made in improving public health worldwide. However, the burden of existing diseases and mortality is not evenly distributed geographically, nor is the rates of improvements. There appears to be an opportunity to better understand population characteristics, resources employed, healthcare delivery systems, and environmental factors through applications of mathematical modeling.