Deadline approaching

Millennium Developmental Goals

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WHAT ARE THE MILLENNIUM DEVELOPMENTAL GOALS?

In September 2000, over 150 world leaders gathered in New York City at the United Nations (UN) Headquarters for an event called the Millennium Summit. Its purpose was to discuss what the role of the UN would be in the 21st century. As a product of these discussions, 189 nations ratified the United Nations Millennium Declaration, which included eight broad Millennium Development Goals (MDGs) that lay out numerous specific quantitative targets for improvement of various health and economic indicators in developing nations of the world.

With less than a year to go before the 2015 deadline on most of these goals, progress varies considerably. We examined how several global health-related goals were progressing toward their targets: specifically Goal 6, regarding the halting of Human Immunodeficiency Virus (HIV) spread and universal access to treatment for the disease, as well as Goal 4, regarding the reduction of child mortality.

GOAL 6: COMBATTING HIV/AIDS

Since the Millennium Declaration was signed, global funding devoted to combatting HIV has increased over tenfold, from US \$1.6 billion in 2001 to over US \$16 billion annually in 2010, resulting in a significant reduction in global HIV burden.⁹ The development and mass production of HIV-fighting drugs at substantially lowered prices compared to those seen in developed nations has reduced the worldwide number of deaths from HIV by 25% in just the past 6 years.⁷ An especially effective strategy in combatting HIV has been the formation of the Medicines Patent Pool, a UN initiative which allows the production of generic HIV, malaria, and tuberculosis pharmaceuticals in high-risk countries while waiving or discounting the drugs' expensive patent fees. In 2000, the global average cost of HIV treatment neared US \$10 000 annually; however, with the advent of fixed-dose combination pills (a single pill containing multiple HIV medications) and the creation of the Medicines Patent Pool, this annual cost has dropped to a median of US \$137 per person,¹⁰ and under US \$70 in some nations.¹¹ This represents an incredible 99% reduction in price in only a decade.

Despite these breakthroughs, as of 2011 only 8 million (55%) of the approximately 15 million people in developing countries who require HIV treatment actually receive it—far from the UN's goal of universal access to treatment.⁷ This still marks a massive improvement over the past decade, where less than 400 000 people received treatment in 2002.¹⁰ In developing nations, access to treatment has been steadily increasing, to the current high of 1.5 million newly treated people per year. This improvement means that the number of people in developing nations receiving HIV treatment will hit an astounding 15 million by 2015—nearly double the figures from 2011, and very close to the UN's overall goal.⁷

The annual HIV infection rate has decreased over 21% globally since the creation of the MDGs, yet still more can be done. The greatest effects on global HIV burden can be exerted by focusing more attention on the highest-risk area: sub-Saharan Africa. Of the 2.5 million people in the world that became infected with HIV in 2011, 1.8 million (approximately 70%) were in sub-Saharan Africa, where the current rate of infection nears an unbelievable 1 in 20.

The simplest, most cost effective way to curb the spread of HIV in this region (and globally) is by promoting education about modes of viral transmission and methods of safe sex, as well as distributing condoms. Research indicates that the introduction of safe-sex education programs such as Asia's 100% Condom Use Programme has been extremely successful, more than doubling the use of condoms in Cambodia and preventing 6 million HIV infections over 15 years in the handful of Asian countries that adopted the program.¹² However, currently only 30% to 35% of sub-Saharan Africans are educated on how HIV is transmitted, up barely 5% from a decade ago. Similarly, the use of condoms has increased only 5% to 10% in that time period, now hovering at around 40%.⁷

One of several reasons for this failure to implement change in sub-Saharan Africa pertains to the quality of education in these nations. For example, sub-Saharan African populations comprise over half of the world's out-of-school children, with enrollment rates at approximately 77%, and over one quarter of these students drop out before reaching the end of primary school education. Literacy rates reflect these disparities, as only 65% of women and 75% of men are able to read and write, representing less than 5% improvement in the last 20 years.⁷ Addressing this sizeable barrier to sexual education lies under the purview of another of the MDGs (Goal 2, universal primary education), and it may be that progress must be made there before sexual education can become more prevalent and an effective HIV-deterrent in sub-Saharan Africa.

GOAL 4: REDUCE CHILD MORTALITY

Another important MDG is Goal 4, reducing child mortality. The original target was to reduce the mortality rate of children under 5 by two-thirds by 2015. Not surprisingly, populations more likely to experience high rates of child mortality tend to be the poorest and most marginalized,¹ highlighting the relationship between economic wellbeing and health outcomes.

About 40.3% of deaths among children under 5 years of age occurred in neonates, with preterm-birth complications and intrapartum-related events as the leading causes. Precluding neonatal deaths, the leading causes of child mortality are pneumonia, diarrhea, and malaria.²

Deconstructing these causes of mortality further necessitates the discussion of social determinants of health. Generally, it is the

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socioeconomically disadvantaged populations of sub-Saharan Africa and South Asia that bear the majority of child mortality burden. Living in remote rural areas, these populations often have limited access to health services and social supports that are known contributors to health. Still, there is also an appreciable burden borne by poor urbanites. It has been reported that factors such as hygiene, overcrowding, and air and water quality may be even worse in urban areas, eliminating the notion of an “urban advantage”.^{3,4}

The link between poverty and undernutrition has been well recognized. It has been estimated that about 45% of all child deaths are associated with undernutrition. Rates of stunting, wasting, and fetal growth restriction are especially high in sub-Saharan Africa and Asia, and are slow to decrease. Compounding the problem is increasing food prices, with global food price indices reaching peak levels in recent years.³

Fortunately, there has been progress. In 1990, the mortality rate for children worldwide was 90 deaths per 1000 live births. As of early 2014, this figure has dropped by 48% to 48 deaths per 1000 live births.¹ Africa in particular has seen some of the greatest decreases in child mortality ever recorded. Of 20 African countries in which the World Bank has conducted detailed surveys of living conditions since 2005, 16 have recorded falling rates of child mortality. Additionally, 12 nations have had rates of reduction of 4.4% or greater, putting them well on their way to meeting the 2015 goal. These dramatic reductions in child mortality have crossed geographical and cultural boundaries, with countries all across the continent, Christian and Muslim, cutting child mortality rates. South Asia, with the second-highest child mortality rate in the world, has seen similar successes.⁵

Broad economic growth as well as public health interventions have been the most important strategies for combatting child mortality.⁶ In Chad, a UNICEF (United Nations International Children’s Emergency Fund)-sponsored immunization program has greatly reduced under-5 mortality. Similarly, in Cambodia, measles immunization increased by 71% between 2000 and 2012, and with support from the World Health Organization (WHO) in reaching communities that were missing out, Cambodia reported no measles cases in 2012. In India and Nigeria, increasing healthcare access to rural communities and women and children, respectively, have been effective strategies.¹

Even with great progress, many organizations cite that the rate of improvement in many countries is still not high enough to meet goal 4 by the 2015 deadline. In the UN’s 2013 progress chart, it is reported that sub-Saharan Africa, Southern Asia, Oceania, the Caucasus and Central Asia still have insufficient progress to meet the 2015 deadline despite vast improvements since 1990.⁷ Becoming a recent priority is neonatal death, which was cited earlier to comprise a large proportion of under-5 deaths. Troublingly, while the rate of child mortality has decreased rapidly since 1990, the rate of neonatal death has been much slower to do so and now comprises an even larger proportion of under-5 deaths.

A more intensive effort is now being made to reduce neonatal death, as evidenced by a global decrease in neonatal mortality, but novel strategies must be employed as the requirements to reduce neonatal mortality differ from those needed to address under-5

mortality. One cost-effective strategy that is suggested in the 2013 UN report is that of postnatal home visits to promote healthy behaviours such as breastfeeding and clean cord care.⁸

Although not all targets will be met by the self-imposed 2015 deadline, it is undisputable that the pursuit of the Millennium Development Goals has had a vastly positive impact on vulnerable populations across the globe. As we progress further into the 21st century, one can only hope that the current promising trends regarding socioeconomic progress and the promotion of global health will continue, and that developed nations will only heighten their role in helping this change endure.

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