Emerging consensus in HIV/AIDS, malaria, tuberculosis, and access to essential medicines

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With 2015 only a decade away, the poorest countries face enormous hurdles to achieving the Millennium Development Goals (MDGs) for health, let alone the broader goal of health for all their citizens. The MDGs all relate to health to some degree; virtually any intervention that reduces poverty and inequality will also decrease the disproportionate vulnerability to disease and injury borne by impoverished people. The UN Millennium Project established a task force concerned with the sixth goal, to "combat HIV/AIDS, malaria and other diseases" and improving access to essential medicines. Its work emphasises broad health challenges while recognising the specific threats posed by the worsening epidemics of HIV/AIDS, tuberculosis, and malaria, which together caused an estimated 6 million deaths in 2004.

The world has the financial and technological resources to bring essential health services to all. In particular, the task force has concluded that existing approaches to combating AIDS, tuberculosis, and malaria, although imperfect, are adequate to greatly reduce the effect of these three diseases. However, the woeful state of health systems in most developing countries prevents these effective interventions from reaching those in greatest need, even where resources are available. Until systems are in place to deliver essential health services on a large scale, attempts to address individual diseases will founder and progress against one will be bought at the price of neglecting others. Although global political and financial commitment for disease control has grown, far more attention and a greater share of resources must be invested in building and strengthening health systems as a whole.

Although the UN Millennium Project Task Force on AIDS, Malaria, TB, Other Major Diseases, and Access to Essential Medicines is publishing four separate reports, we are united in the conviction that the these concerns must be addressed together through stronger health systems. In this article, we present some of our major recommendations.

HIV/AIDS

Almost 40 million people have HIV, 5 million more were infected in 2004, and more than 3 million died from AIDS that year. In sub-Saharan Africa—the worst affected region—average prevalence may be levelling off, but the worst of mortality and its social and economic consequences are still to come. In Russia, India, China, and elsewhere, younger epidemics remain concentrated in vulnerable populations, but are growing rapidly.[1]

We have effective methods to fight HIV/AIDS, including: condoms and behaviour change campaigns in communities, schools, workplaces, and the mass media; harm reduction measures to limit spread in injecting drug users; simple antiretroviral protocols to reduce mother-to-child transmission; and antiretroviral therapy to reduce morbidity and prolong the lives of those who already have the virus.[2]

Over the past few years, much of advocates', donors', and affected countries' attention has focused on the long-overdue effort to expand access to antiretroviral therapy, which is still available to less than 10% of those who urgently require it. The task force fully supports these efforts but urges an equal commitment to prevention, in the form of greatly expanded access to basic prevention services accompanied by legal and policy changes to end discrimination and violence against women, populations at increased risk of HIV infection, and people living with HIV.[3] Only comprehensive and expanded prevention can bring the epidemic under control, and only by scaling up prevention can the full benefits of greater access to treatment be realised.[4]

The greatest obstacle to delivery of HIV/AIDS services, especially antiretroviral treatment, is the appalling state of health systems in much of the developing world,

particularly the acute shortage of skilled health workers in many countries.[5] Overcoming this problem will require sustained investment in health systems, full use of existing clinical staff by delegation of many tasks from physicians to nurses and other mid-level cadres, and expansion of the roles of community health-care workers and trained volunteers. A substantial share of new funds for AIDS treatment in developing countries should go to strengthening health systems, both to reach treatment targets and to ensure that treatment efforts do not divert staff and other scarce resources from the delivery of other vitally needed health services. Furthermore, the critical connections between HIV/AIDS and tuberculosis must be recognised on every level, and addressed with appropriate investments.

Malaria

A preventable and curable disease, malaria causes over 1 million deaths—most in children younger than 5 years—and 300–500 million episodes of acute illness each year.[6] This disease affects more than 50% of the world's population,[7] and hits tropical Africa hardest. This region bears more than 90% of the global malaria burden.[6] Malaria control is increasingly recognised as playing a key role in poverty reduction in countries in which it is endemic. The disease exacts its toll on agricultural households in rural tropical areas where access to preventive and curative services is limited. A brief episode that delays planting or coincides with harvesting can have catastrophic economic effects and can deepen impoverishment at the household level, especially if antimalarial medicines are purchased out of meagre cash reserves.

A range of effective antimalarial tools and interventions exist for the prevention, treatment, and control of malaria, including use of insecticide-treated bednets; indoor residual spraying; intermittent presumptive treatment during pregnancy; early diagnosis and prompt treatment with effective antimalarials; management of the environment to control mosquitoes; health education; and epidemic forecasting, prevention, and response. However, coverage levels are inadequate in endemic countries, especially in poor communities. The successful experiences in Ethiopia, Vietnam, Madagascar, South Africa, and Tanzania indicate that sustained reductions in malaria morbidity and mortality can be achieved when programmes are implemented through well coordinated efforts that span regional and national levels. 6 years after the launch of the Roll Back Malaria initiative, country-level implementation has been severely limited by a shortage of resources for large-scale procurement of essential antimalarial commodities and ineffective health systems.

The working group on malaria puts forward a global plan for scaling up country-level malaria activities and proposes a measurable target for malaria: "reduce malaria morbidity and mortality by 75% by 2015 from the 2005 baseline level".[8] At the core of an operational framework is the implementation of integrated packages of effective antimalarial interventions designed to improve health nationally while also promoting economic development locally. An integral part of this global plan is the building of stronger national health systems as a platform for delivering essential antimalarial commodities and effective interventions. The public good will be best served by free provision of insecticide-treated nets, application of residual insecticides, and provision of effective antimalarial medicines and diagnostics. Adequate information systems and effective management are paramount to monitor and assess progress for improved implementation and resource allocation. An intensified programme of research is necessary to develop new, improved, and affordable tools such as alternative antimalarials, insecticides, and diagnostics.

Presently, the Global Fund to Fight AIDS, Tuberculosis and Malaria allocates about US$450 million per year to malaria control,[9] and has generated optimism for breakthroughs in prevention, treatment, and control. Nonetheless, funding remains far below the level required—an estimated $2–3 billion per year—to scale up the response against malaria in endemic areas.[8] Closing this resource gap is possible, but will require the combined efforts of donor nations and affected countries.

Tuberculosis

In 2004, about 2 million people died as a result of tuberculosis, and 8–9 million fell ill. This disease affects poor and vulnerable populations hardest and has worsened in recent years. Tuberculosis is a leading killer of people with HIV, and up to 80% of tuberculosis patients are HIV positive in countries with high prevalence of HIV. The spread of multidrug resistant tuberculosis highlights the global threat of poor tuberculosis control and of the failure to treat all patients properly. The Stop TB Partnership, engaging nearly 300 governments and agencies, has brought consensus on approaches to global control of this disease, galvanised support, and launched new support mechanisms, such as the Global TB Drug Facility, an initiative to increase access to high-quality tuberculosis drugs.[10] The Working Group on Tuberculosis recommends seven priorities to meet the MDG targets for this disease for 2015 (panel).[11]

Access to medicines

Roughly 1·7 billion people have inadequate or no access to life-saving medicines. 80% of these people live in developing countries in which deficient supplies of such medicines are a major obstacle to good health.[16] Reliable provision of essential drugs is a strong indicator of the effectiveness of the health system. Moreover, the flow of drugs into and within resource-poor countries (especially countries without their own manufacturing capabilities) is inextricably linked to wider systemic issues related to international and regional trade agreements and to national governance. Underlying these obstacles to access

are the social and cultural constraints that disproportionately prevent women, children, ethnic minorities, and other marginalised populations from gaining access to medicines.

The Working Group on Access to Medicines identified several general barriers to medicine such as human resource inadequacies (including pharmacists and technicians), basic health infrastructure deficiencies, weak political will, and inadequate donor assistance coupled with lack of donor coordination.[17] Furthermore, the working group identified major specific barriers such as the shortage of urgently needed new drugs to address priority diseases of poor countries (including tuberculosis, multidrug-resistant tuberculosis, and malaria). However, the existing incentive structure is inadequate for promotion of research and development of medicines targeted at diseases that are disproportionately common in poor populations. The Agreement on Trade Related Aspects of Intellectual Property legislation and other regional and international trade agreements may compromise the ability of countries without their own production capacity to gain access to new, vital medicines.[17]

The strengthening of health systems at local and national levels must include increasing the numbers of pharmacists and pharmacy technicians. The development and enforcement of regulations for drug supply systems and quality standards that conform to accepted safety standards such as those developed by WHO and the Global Fund to Fight AIDS, Tuberculosis and Malaria will assure that medicines are properly stored and transported, and that they are safe and effective. Complementary to these regulations is the need to support judicial systems in the enforcement of national regulations and support concrete actions against corruption and diversion. At the global level, investment in global public health, including the development of new drugs for the diseases of poor people, must be increased.

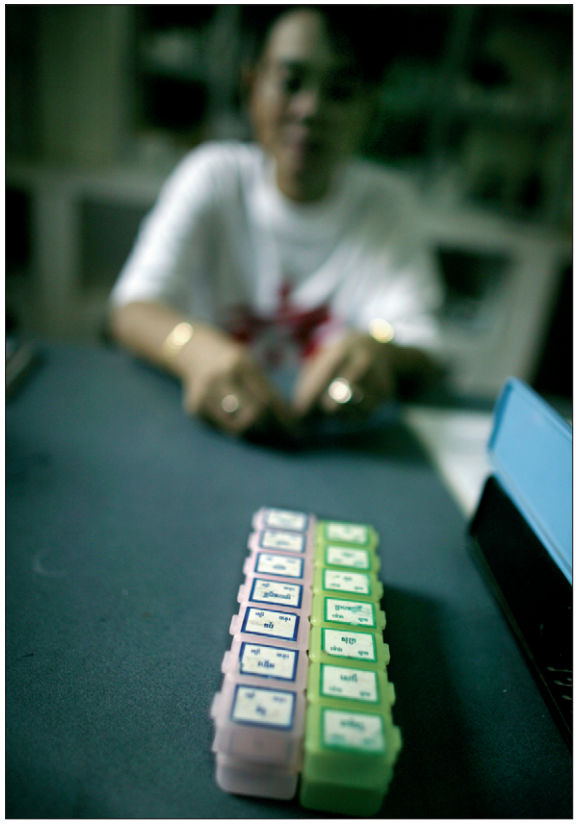
Recommendations and conclusions

Lasting control of AIDS, tuberculosis, and malaria will depend on strengthening health systems as well as disease-specific programmes. Doing so will require sustained investment in physical infrastructure, drug distribution systems, management at all levels, and, most importantly, human resources. In many countries, salaries will have to be increased substantially to recruit and retain a motivated health-care workforce and to stem the loss of skilled staff to the developed world. As health systems are expanded and improved, existing practical approaches can be deployed rapidly and could save millions of lives. These approaches may include, for example, training of community health workers to deliver some essential services and stimulation of demand through improved outreach and education.

Upgrading of health systems in the poorest countries will require focused, long-term funding from international donors, and consistent political commitment from donors and recipients alike. Although funding for global public health (especially the fight against AIDS) has expanded in recent years, it remains insufficient, largely short-term, poorly coordinated, and unpredictable, as evidenced by the funding shortfalls faced by the Global Fund to Fight AIDS, Tuberculosis and Malaria. The failure of developed countries to fulfil their longstanding pledges of more development aid, and the failure of developing countries themselves to invest in health, are overarching barriers to health systems development. Furthermore, the lack of coordination among international financial institutions, bilateral donors, and non-governmental organisations exhausts scarce resources and duplicates effort.

Success will require more than increased public funding. Private partners must also be engaged in new ways to expand demand and access to high-quality services and to help compensate for the shortage of human resources in the public sector. Removing bottlenecks calls for improved priority-setting and strategic innovation at the local, national, and global level. Moreover, health services must be financed equitably. User fees, for example, are an important barrier to health-care access for the poor and should be abolished.

These strategies must be led by countries themselves: they cannot be imposed from the outside. However, donor nations, international institutions, and activists have a



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responsibility to ensure that funding is not the critical barrier to countries' efforts to reach the MDGs. The countries, in turn, must spearhead the effort by increasing their own investment in health systems and establishing strict monitoring and evaluation to show results.

Panel: Recommended tuberculosis priorities

Ensure universal access to high-quality tuberculosis care
Patients should have access to the standard of care (effective diagnosis, treatment, and reporting) consistent with the WHO-recommended directly observed therapy strategy (DOTS). To achieve diagnosis and treatment goals, focused outreach to poor and marginalised communities must be a priority. More than 16 million patients have been treated with DOTS so far, yet more than half of those who fall ill each year still do not have access. Globally, tuberculosis costs more than US$3·3 billion a year in lost productivity. For each dollar invested in DOTS, the return is more than three times greater.[12]

Address the tuberculosis/HIV emergency now
Coordinated action must be swift to reduce HIV transmission, to reduce incidence of tuberculosis among people living with HIV/AIDS, and to improve care of those affected by both diseases. The strategies and interventions are defined, but scale-up is too slow. Coordinating these efforts would be a cost-effective use of human and fiscal resources.[13]

Engage all primary care providers in high quality tuberculosis care
Rapid gains in coverage and care are possible where national tuberculosis programmes partner with all public and private providers and institutions.[14]

Partner with communities to stop tuberculosis
National tuberculosis programmes will be most effective where communities and grassroots organisations take part in programme planning and implementation.

Stop the spread of multidrug-resistant tuberculosis
Effective DOTS programmes must expand to keep emergence of further drug resistance to a minimum, and new treatment guidelines and delivery strategies for multidrug resistant tuberculosis patients ("DOTS-Plus") must be scaled up and integrated with mainstream health care.[15]

Accelerate the development of critically needed new tools
Greater demand, development incentives, and innovation are needed to develop and roll out more effective and user-friendly tools (drugs, diagnostics, and vaccines). Several new public-private partnerships are helping lead the way.

Support the Global Plan to Stop TB
The Global Plan to Stop TB 2001–2005, and complementary national strategic plans, have provided the early road map for achieving the MDG targets. Work on the next global plan (2006–2015) is underway. The annual resource gap has previously been estimated to be at least US$1 billion for global tuberculosis control and development of new tools.

HIV/AIDS, tuberculosis, and malaria are only three of the challenges facing poor people. Only stronger, integrated health systems can provide a platform to sustain a successful fight against these diseases while advancing the other health priorities of developing countries, including child and maternal health and chronic disease. Furthermore, as the task force has emphasised, health remains tightly linked to the full range of development challenges, including food security, education, gender equality, water and sanitation, and poverty reduction. These too must be addressed to ensure the groundbreaking advances needed in health.

Contributors
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Conflict of interest statement
We declare that we have no conflict of interest.

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