Achieving a Dream: Meeting Policy Goals Related to Improving Drug Access

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Abstract: International experts recognize that significant inequities exist in the accessibility of life-saving medicines among poor and vulnerable populations, especially in developing countries. This article highlights that drug access even for relatively cheap medicines is out of reach for the vast numbers of global poor. This badly affects people living with HIV/AIDS who face serious obstacles in accessing ARVs. The same concerns are attributed to neglected diseases. Despite international meetings, promises from the pharmaceutical industry and a lot of media attention little has changed in the past 20 years. The accessibility gap to life-saving drugs could be reduced by the UNITAID initiative to pool patents for the many different ARVs, but the reality is that UNITAID is still a promise. To surmount this global problem of inequity requires a rethinking of traditional models of drug access and health objectives that should not be compromised by commercial interests.

Life saving and life-enhancing properties are the foundation of the moral and commercial significance of drugs. Pharmaceuticals are not ordinary "goods". With about 25 million persons living with HIV/AIDS still without access to needed drugs, the HIV/AIDS pandemic illuminated that access to life saving medicines is a basic human right, which is now becoming recognised worldwide. This is accepted internationally, for example, under the International Covenant on Economic, Social and Cultural Rights, in which Article 12 states that national governments have the responsibility to ensure and protect the right of their populations to the "highest attainable standard of physical and mental health" emphasizing health as an "inalienable and universal" human right. The UN Commission on Human Rights (2001) calls on States "to promote the right to health through access to affordable treatments and…(the) provision of essential drugs". In spite of international appeal experts recognize that significant gaps exist in the agreement with respect to patent protection and access to as well as availability of life-saving medicines in developing countries. According to Gro Harlem Brundtland, former Director-General of WHO (WHO, 2000): "At the beginning of the 21st Century, one-third of the world's population still lacks access to the essential drugs it needs for good health. In the poorest parts of Africa and Asia, over 50% of the population do not have access to the most vital drugs".

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The inefficient use of pharmaceutical resources in many developing countries also substantially reduces access to essential drugs and potential health benefits. Sometimes it is difficult to discern the difference between inefficiency and corruption. Governments in developing countries commonly lack adequate institutional capacity to regulate pharmaceutical activities effectively. WHO reports that less than one in three regulatory agencies in developing countries works well and limited incentives for new drug development for diseases of developing countries reveal another market failure.

Drug access as noted above is critical. But so is drug availability. The issue of lags in research and development are not new. As Angell (2004) notes "The stream of new drugs has slowed to a trickle, and few of them are innovative in any sense of the word" [1]. Research and development (R&D) in the pharmaceutical industry is skewed; it largely does not invest in pharmaceuticals to treat tropical diseases. Of 1,223 new chemical entities (NCEs) commercialized from 1975-1990 379 were considered therapeutic innovations, and only 13 were specifically for tropical diseases (which comprise 10% of the world's disease burden; and affect 65% of the world's population). The common explanation for this is that the cost of R&D for them is prohibitive taking into account the low purchasing power of the poor countries, the presence of competition and counterfeit drugs, and the cost of adhering to quality standards [2].

Despite international meetings focused on the issue, promises from the pharmaceutical industry and a lot of

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media attention, little has changed in the past 20 years. Updating the NCEs data to 2004 reveals that, since 1990, among the 163 new NCEs only 4 NCEs were for neglected diseases (malaria and leishmaniasis) [3]. Developing countries represent a relatively small proportion of the global pharmaceutical market with only 20%, though they represent 80% of world's population. Most people in these countries must pay out of pocket for needed drugs and simply don't have the resources to do so. This leads to limited market incentives for the development of new drugs specific to their diseases (including many tropical diseases).

Drug access, even for relatively cheap medicines, is out of reach for the vast numbers of global poor [4,5]. This relates particularly to people living with HIV/AIDS. An estimated 33 million people were living with HIV in 2007, and 1/3 of them also had TB. In response towards universal access and the scaling up priority of HIV/AIDS interventions in the health sector by WHO, UNAIDS, the Global Fund, PEPFAR and UNICEF (2008) nearly 3 million people are now receiving anti-retroviral therapy (ART) in low and middle income countries. However, this still represents only about 20% of those in need of these life saving drugs. And, there are more than 3 million new infections each year (and about 2.5 million deaths).

People living with HIV/AIDS in badly affected countries suffer from other obstacles in accessing their needed antiretroviral drugs (ARVs), including weak healthcare systems; lack of trained staff & "brain drain", all of which calls strongly for the designing and implementation of task shifting (i.e., the shifting of responsibilities from higher trained personnel to lower trained ones, who can well handle the delegation); sustainable long-term financing; poor follow-up of babies born to HIV-positive mothers (in 2007, less than 4 per cent of such babies received proper treatment (Media Global, 2008); HIV and TB services are insufficiently integrated and too many people are losing their lives because they are unable to access life-saving medications for both diseases. It is best to integrate these services within the existing health care systems to strengthen them so that other desired targets can also be achieved.

As part of Millennium Development Goal #4 is to reduce child mortality with the target of reducing by two thirds the mortality rate among children under five by 2015, UNICEF reports that six million out of the eleven million children who die needlessly each year in developing countries could be saved by low-tech interventions, including access to essential medicines such as antibiotics. Ill-adapted and high cost drugs are challenges to children. Generally, most drugs currently available are not suited for use in resource-limited settings as they are either powders that need to be mixed with water or bitter-tasting syrups that also require refrigeration. According to Karen Day, pharmacist coordinator at Medecins Sans Frontieres' (MSF) Campaign for Access to Essential Medicines: "So few children are born with HIV in developed countries that research into pediatric formulations is not a priority for pharmaceutical companies" [6]. A real challenge that treatment providers, including MSF, are facing is high prices for newer ARVs. People need to be able to have access to newer drugs to give them alternatives when they experience the side effects of their current drugs, or when they develop drug resistance. For these situations, they need access to new, more potent and less-toxic drugs. However, there is a serious price increase for a 'second-line' treatment regimens, from nine-fold to up to 17-fold in some middle-income countries where the drugs are patented and treatment providers must buy the product from the originator company.

The same concerns are attributed to neglected diseases, particularly infectious illnesses affecting developing countries that lack effective, affordable and easy to use drug treatments (e.g. malaria, tuberculosis, sleeping sickness). The public sector remains on the outside of drug development putting most of the critical decision making in the domain of the pharmaceutical industry, which prioritizes its R&D to marketable, profitable drugs (i.e. cancer, heart disease, depression, obesity, hair loss). Neglected diseases can be treated - but in most cases, treatments are antique (over 70 years old), becoming less effective, or non-existent. While neglected diseases do represent some kind of marketable profit (e.g. malaria, AIDS), most neglected diseases have no marketing opportunities or purchasing power and fall completely outside the pharmaceutical market [7]. This leads to the conclusion that we should not rely on the pharmaceutical industry to voluntarily invest in research and development for the neglected and most neglected diseases.

Accordingly, NGOs responding to the acute need have come forward to pressure key stakeholders, both in the government and industry. Some of these leading NGOs include: Global Treatment Action Group; People's Health Movement; International Partners in Health; Essential-drugs.org; Third World Network; Global Forum for Health Research; and Drugs for Neglected Diseases Initiative (DNDi). Supportive initiatives also come from Medicines Sans Frontieres (MSF), an international humanitarian aid NGO, who in 2003 established DNDi. MSF formalized DNDi by uniting the work of five public sector institutions: Oswaldo Cruz Foundation (Brazil); Indian Council for Medical Research; Kenya Medical Research Institute; Ministry of Health of Malaysia; and Institute Pasteur (France).

DNDi brings together different players involved in clinical trials, treating neglected patients and enhancing the drug manufacturing capacities of developing countries [8]. DNDi currently focuses mainly on three neglected diseases. The first is sleeping sickness (Human African Trypanosomiasis) that infects 50,000 – 150,000 people yearly, is fatal if not treated and is localized only in sub-Saharan Africa. The second is Visceral Leishmaniasis (or Black Sickness/Kala-Azar) that affects over 12 million people, and is located in over 80 particularly poor countries. The third is Chagas disease (another human form of trypanosomiasis) which is highly prevalent and localized in Latin America, and affects 8 million, mainly children. DNDi also focuses on malaria that presents in over 100 countries infecting 350- 500 million persons yearly, and causes over 1 million deaths per year (3000 deaths per day). DNDi aims to have 6-7 drugs registered through its 12 year initiative by 2015. The cost of this initiative is over US$250 million, with the R&D stages being the most expensive. Currently, DNDi has ten

project drugs in the R&D stages and last year announced that, together with Sanofi-Aventis, they have developed a fixed-dose combination of two antimalarial compounds, artesunate and amodiaquine (AS/AQ). It is to be easier to use and more affordable than any other currently available combination. DNDi, itself, developed the formulation combining the two active ingredients into a single tablet and carried out the initial pharmaceutical and clinical development, before choosing Sanofi-Aventis as its industry partner for further development.

DNDi, though, cannot rely on market-based profit; rather it depends on public investment. Funding initially was provided by MSF, and current funders are: the European Union, international organizations, the general public and specialized private foundations. Bill and Melinda Gates Foundation, for example, provided US$25.7 million in 2007. In March 2008, DNDi announced a new two year collaboration with GlaxoSmithKline (GSK), focusing on R&D for three neglected diseases: sleeping sickness, Chagas disease and visceral leishmaniasis. Research will take place at GSK facilities in Spain. It is expected that further collaboration will be conducted with academic centers, including the London School of Hygiene & Tropical Medicine (LSHTM).

The gap in availability of life-saving drugs could be reduced by the UNITAID [9] initiative on pooling patents for the many different anti-retrovirals (ARVs). This could allow low- and middle-income countries to continue to access drugs at affordable prices and also facilitate the development of combination treatments and pediatric formulations. A patent pool is created when a number of patent rights, held by different owners (e.g., companies, universities, government institutions), are brought together (or pooled) and made available on a non-exclusive basis. Such a scheme allows easier access to many patents and other intellectual properties and reduces risks and costs to companies. In February 2009, GSK announced it was making its technology patents for the control of many diseases available to such a pool. Patent pools make life saving medicines more widely available and affordable. UNITAID believes that this will greatly benefit children and people who have grown resistant to conventional AIDS therapy, for whom few fixed dose combination options currently exist [10,11]. But the reality is that UNITAID is still a promise and has yet to prove its value in helping to improve drug access. Moreover, the types of patents that are available in this pooling will be critical, because if the industry continues to keep patents closed in vital new therapies, we will achieve little.

Pharmaceutical access is vital to save lives. Health objectives should not be compromised by commercial objectives and political pressure from interest groups. Various organizations and individuals are trying to address the injustice of lack of access to life saving drugs. To overcome this requires a rethinking of traditional models and an honest appraisal of what partnerships mean and can achieve.

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