Summary of the Sixteenth Meeting of the
International Task Force for Disease Eradication (II)
January 12, 2010

The Sixteenth Meeting of the International Task Force for Disease Eradication (ITFDE) was convened at The Carter Center from 8:30am to 3:30pm on January 12, 2010 to discuss tuberculosis. The Task Force Members are: Sir George Alleyne, Johns Hopkins University; Mr. Ekkehard Betsch, The World Bank; Dr. Stephen Blount, Centers for Disease Control and Prevention (CDC); Dr. Mickey Chopra, UNICEF; Dr. Donald Hopkins, The Carter Center (Chair); Dr. Adetokunbo Lucas, Harvard University; Professor David Molyneux, Liverpool School of Tropical Medicine (Rtd.); Dr. Mark Rosenberg, Task Force for Global Health; Dr. Lorenzo Savioli, World Health Organization (WHO); Dr. Harrison Spencer, Association of Schools of Public Health; Dr. Dyann Wirth, Harvard School of Public Health; and Dr. Yoichi Yamagata, Japan

patients; use of standard short-course chemotherapy regimen under supervision in all patients; assurance of a regular supply of drugs; and a system for surveillance and monitoring of the program performance. Specific targets were set by the World Health Assembly in 1991: to detect at least 70% of estimated cases and cure at least 85% of those detected. The Stop TB Strategy, launched by WHO in 2006, calls for enhancing the DOTS strategy to address new challenges and to expand access to the most vulnerable populations. It targets achievement of the TB-related Millennium Development Goal 6, target 6c: "to have halted by 2015 and begun to reverse the incidence of tuberculosis". Other elements of the Stop TB Strategy require addressing TB/HIV, MDR-TB and the needs of the poor and vulnerable; contributing to strengthening health systems; engaging all healthcare providers; empowering people with tuberculosis and their communities; and promoting research. The Stop TB Partnership, established in 2001 and housed by WHO, defined the goals of reducing overall prevalence and deaths from tuberculosis by 50% by 2015 (compared to 1990), and achieving elimination (defined as an incidence of <1 case per million population) by 2050 (global incidence is about 1,400 per million population now).

Major achievements between 1995 and 2008 include 36 million patients cured, more than 6 million deaths averted compared to non-DOTS treatment, reduction of case fatality rate from 7.6% to 4%, and attainment of highest-ever cure rates of 87% in 2007-8. Incidence rates are declining globally and in all sub-regions except in certain African countries since 2004, but not as rapidly as predicted (less than 1% per year) or as necessary in order to reach the program's quantitative targets. However, the absolute number of cases is still increasing, due to population growth off-setting per capita rate reductions, and limited reduction in transmission. Funding for tuberculosis programs has increased substantially in recent years, from US$2.7 billion in 2006 to US$4.1 billion in 2010, including near doubling of government funding to almost US$2.5 billion. However, the funding gap remains substantial compared to funding needs estimated by the Global Plan to Stop TB.

Overall, about 61% (5.5 million) of estimated tuberculosis cases were reported as of 2008, while less than 10% of MDR-TB cases are detected. Overall case detection has been stagnating globally since 2006. This is partly linked to the failure to report cases detected within the non-state sector. For example, between 1999 and 2005, the program in Bangalore, India increased reporting of tuberculosis cases nearly five-fold by involving health providers among NGOs, private, corporate, medical college and other government entities outside of the designated services of the national program. Delayed detection of infectious cases is also a problem, especially where access to services is seriously impaired. Few laboratories in the African Region can test for resistant strains of tuberculosis. In 2008, about 45% of TB patients in Africa were tested for HIV infection, while about 4% of HIV positive persons were screened for tuberculosis infection. Coverage with some key interventions to address HIV-associated tuberculosis has been scaled up in recent years: an estimated 73% of TB/HIV infected Africans were on co-trimoxazole preventive therapy (CPT) for treatment of concomitant bacterial infections in 2008; 31% were placed on anti-retroviral therapy (ART) for treatment of their HIV infection.

In the “syndemic” of dual TB/HIV infection, the two diseases act synergistically to cause excess morbidity and mortality. Tuberculosis is common and deadly in persons with HIV infection, with up to 25-50% dying within months. Persons with such dual infections comprise about 30% of all deaths from tuberculosis. In the African subregion, where this syndemic is most prevalent, HIV prevalence

health care, and in numerous other poorly understood ways. Other studies suggest significant population attributable fraction of risk of tuberculosis in association with

tuberculosis control yields an average of about $10 in benefits. The need to develop and publicize more such data, including the potential numbers of Disability Adjusted Life Years (DALYS) that could be saved by tuberculosis interventions was also emphasized in the discussion. Control of tuberculosis can be presented as a way to combat poverty, and as a driver of improved services to vulnerable, deprived, marginalized groups. More can be accomplished using the tools that we already have to combat tuberculosis.

There was not a separate presentation on the status of tuberculosis research, as planned, due to unforeseen circumstances. It was evident, however, that the existing tools for diagnosis, prevention and treatment of tuberculosis are very old, increasingly outdated, and in the case of available drugs, of diminishing effectiveness. Thanks largely to recent investments by the Bill & Melinda Gates Foundation, some potential new diagnostics, drugs, and a better tuberculosis vaccine are or may be in the pipeline, but the most optimistic time to possible delivery of any successful new tools is still several years away, and their improvement over existing tools may only be marginal. Some knowledgeable members of the Task Force therefore suggested that the current situation calls for a radical re-thinking in the direction of higher risk basic research on tuberculosis and tubercle bacilli in the hope of a possible substantial success in the longer term, while making batter use of currently available tools for the foreseeable future.

Tuberculosis is a chronic disease, and delivering effective health care to prevent and treat it could provide the basis for combating other chronic conditions. In the case of tuberculosis, however, stigma against persons suffering from the disease varies in different cultures, but must be addressed where it occurs. It was pointed out that volunteer or compensated community health workers have proven very effective in some programs, as has the "kinship strategy"[3], and those approaches might be useful to help extend the reach of interventions against tuberculosis and make detection of cases and follow-up of the long 6-month treatment easier.

The need for better surveillance and reporting of tuberculosis cases and for focusing on a limited set of key indicators of coverage (process) and impact (outcome) of tuberculosis programs was discussed extensively. The value of using absolute numbers of cases reported instead of prevalence or incidence rates in order to appreciate priorities for reducing the global burden of the disease was also mentioned. Judicious use of computers to help process reports of cases and the status of interventions as revealed by key indices would help leverage the surveillance data to guide programs. Leaders of the global program were strongly urged to gather whatever reports are available into an annual surveillance summary for publication in the World Health Organization's *Weekly Epidemiological Record*. Experience of other programs has shown the effectiveness of such publications to stimulate improved reporting of cases and of other program data.
Members of the Task Force agreed that it is in the self-interest of the US to provide more support for tuberculosis research (operational, laboratory, epidemiologic, health systems)

[3] Katabarwa MN, Habomugisha P, Agunyo S, McKelvey AC, Ogweng N, Kwebiiha S, Byenume F, Male B, McFarland D (2010). Traditional kinship system enhanced classic community-directed treatment with ivermectin (CDTI) for onchocerciasis control in Uganda. *Trans R Soc Trop Med Hyg.* [in press]

and control, similar to the greatly enhanced support for control of HIV/AIDS and malaria.

Conclusions and Recommendations

1. Implementation of the World Health Organization-led DOTS strategy since 1995 and the enhanced Stop TB Strategy beginning in 2006 has advanced control of tuberculosis significantly. The global Stop TB Partnership, established in 2001 and hosted by WHO, may serve as a model for coordinating collaborative efforts among several stakeholders.
2. Although tuberculosis cannot be eradicated in the foreseeable future with currently available tools, progress towards better control and reduction in transmission rates can and should be accelerated urgently.
3. The neglect of tuberculosis research over several decades has taken a large toll in additional illness and deaths, in increased resistance to available therapeutic drugs, and in lack of new tools for diagnosis, prevention and treatment, but funding by the U.S. National Institutes of Health, the Bill & Melinda Gates Foundation and others has stimulated important new research in recent years. Much more research is needed however, and increase more support by public and private agencies, especially in Europe, is encouraged.
4.

mortality in people with HIV can be reduced through early HIV testing of TB patients, high quality TB screening in people with HIV, increased use of ART and IPT, and scale-up of TB culture capacity.

8. The WHO's Stop TB Tuberculosis Department should publish annual summaries of global surveillance and interventions data, including key indices of programmatic operations, in WHO’s