



Report of the HIV/TB Research meeting held in conjunction with the 19th Conference on Retroviruses and Opportunistic Infections (CROI 2012)

The World Health Organization and the Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) organized the 6th HIV/TB research meeting on behalf of the TB/HIV Working Group of the Stop TB Partnership, affiliated with the 19th Conference on Retroviruses and Opportunistic Infections (CROI 2012) in Seattle, USA on 5 March, 2012. The meeting discussed critical knowledge and research gaps on impact and measurement of TB transmission in high HIV burden settings. The meeting was chaired by Dr Diane Havlir, Chair of the TB/HIV Working Group and Dr Gottfried Hirnschall, Director of the HIV/AIDS Department of WHO. Drs. Richard Chaisson of John Hopkins University and Haileyesus Getahun of WHO's Stop TB Department convened the meeting. Dr Hirnschall opened the meeting and introduced the updated [WHO policy on collaborative TB/HIV activities](#) that has saved nearly a million lives over six years (2005-2010) since its introduction in interim form in 2004.

Dr Peter Godfrey-Faussett of London School of Hygiene and Tropical Medicine ([link to presentation](#)) presented on the TB transmission measurement experience from ZAMSTAR, a community based trial of nearly 1.2 million study population in South Africa and Zambia. He mentioned that the TB infection rate measured through repeated tuberculin skin test surveys among school children showed a wide variability among communities. The introduction of household interventions using a TB patient as gateway to the household at risk of TB and HIV, reduced TB transmission. He also highlighted the challenges of using TST to measure TB transmission and called for the development of new tools to determine recent infection. Dr Lisa Nelson from CDC Mozambique ([link to presentation](#)) commented on Dr Godfrey-Faussett's presentation and emphasised the need to select the right population group to help identify recent TB infection. She questioned the utility of children living with an index TB case as the appropriate group to measure TB transmission. She suggested the innovative use of existing platforms such as demographic and health surveys and ongoing clinical trials sites for better understanding of the measurement of transmission of TB. She also mentioned the need for exploring the role of chest radiography as a measurement of TB transmission at community level in HIV and TB prevalent settings.

Dr Christopher Whalen of University of Georgia, USA ([link to presentation](#)) presented on the results of a 14 year study measuring household TB transmission, stratified by HIV status, from Kampala, Uganda. He concluded that TB index cases living with HIV are possibly less infectious and more likely to get TB from contacts outside their homes in the community (41% for people living with HIV vs. 16% for HIV negatives). In addition, household TB contacts living with HIV have the same likelihood of TB infection as HIV negative contacts but have a 3-4 fold increased risk of developing active TB disease. Dr Stewart Reid of the Center for Infectious Diseases Research in Zambia ([link to presentation](#)) commented on Dr Whalen's presentation and also provided a brief summary of the evidence from previous studies that showed the same results with most cases becoming infected with TB by contacts outside their households. He emphasised the concept of "place finding" rather than "case finding" in order to maximise

interventions to reduce transmission in places where people congregate such as health facilities, bars, churches and transportation.

Dr Gabriel Chamie of the University of California, San Francisco presented ([link to presentation](#)) the results of a pilot study that used a carbon dioxide tracer gas decay technique to explore the link between household ventilation and TB transmission. The investigators included pulmonary TB cases and their household contacts within their study and described the physical and social characteristics of the patients' home in Kampala, Uganda. They found lower ventilation levels in patient homes with TB, warranting further study in the area. Likewise they found that low-cost interventions such as opening windows at homes and the use of window bars for security and screens for malaria prevention could have impact in reducing TB transmission and merit further investigation. Dr Neil Martinson of the Perinatal HIV Research Unit from South Africa commented on Dr Chamie's presentation and underlined the importance of similar studies to further understand the transmission dynamics of TB to yield effective interventions. He emphasized the need to incorporate TB transmission measurements into such studies and assess the impact of HIV on TB transmission.

Dr David Dowdy of John Hopkins University, USA presented ([link to presentation](#)) modeling work that investigated the degree of ongoing community-wide TB transmission in Rio de Janeiro, Brazil, that originates from spatial hotspots. He concluded that in Rio de Janeiro the hotspots despite representing only 6% of the population, contributed to 35% of TB transmission in the City. He underlined that targeted TB control efforts in the 6% population could have a long term impact. Dr Richard White of the London School of Hygiene and Tropical Medicine provided commentary ([link to presentation](#)) and emphasized the public health impact of the results of the modeling to argue for more health investment for disadvantaged communities.