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Editorial

Taking forward the Stop TB Partnership and World Health Organization Joint Theme for World TB Day March 24th 2018 – “Wanted: Leaders for a TB-Free World. You can make history. End TB”

World TB Day, March 24th commemorates the day in March 1882 when Professor Robert Koch made the groundbreaking announcement in Berlin of his discovery of *Mycobacterium tuberculosis* as the cause of Tuberculosis (TB) (Koch, 1882). At the time of his announcement, there was a deadly TB epidemic, rampaging throughout Europe and the Americas, causing the death of one out of every seven people. Since Koch's announcement, *Mycobacterium tuberculosis* has defied worldwide efforts by public health systems, researchers, governments and the World Health Organization (WHO) to eradicate it. The data presented in the WHO Global TB Report 2017 (World Health Organization, 2017a) makes very gruesome reading. In 2016 there were an estimated 10.4 million people who developed TB disease worldwide, of which 90% were adults, 35% female and 10% were HIV-co-infected people. An estimated 40% of active TB cases go undiagnosed each year. One hundred and thirty-six years since Koch's announcement, TB remains a major global public health issue and TB has surpassed HIV/AIDS and malaria as the world's top cause of death from an infectious disease! On World TB Day, March 24th, 2018, we need to reflect on the current status quo of the continuing devastating global TB epidemic.

For a disease which has had effective treatment available for the past 50 years, TB exerts a huge and unacceptable global impact on morbidity and mortality rates. In 2016, TB caused the unnecessary deaths of an estimated 1.7 million people of which 0.4 million were among people living with HIV (World Health Organization, 2017a). Thirty high TB burden countries accounted for 87% of the 10.4 million incident TB cases globally. Five countries, India, Indonesia, China, the Philippines and Pakistan accounted for 56% of the 10.4 million cases. Of these, China, India and Indonesia accounted for 45% of total global cases in 2016 and Nigeria and South Africa each accounted for 4% (Koch, 1882). Drug-resistant TB (DR-TB) has been reported from every corner of the globe and has become an ominous threat to global health security. In 2016, there were 600,000 new cases with resistance to rifampicin (RR-TB), of which 490,000 had multidrug-resistant TB (MDR-TB) defined as resistance to rifampicin and isoniazid. Worryingly, three high TB endemic countries with strong and growing economies, India, China and the Russian Federation, had almost half (47%) of the 490,000 MDR-TB cases. Extensively drug resistant TB (XDR-TB, defined as MDR-TB plus resistance to any fluoroquinolone and at least one of three injectable second-line drugs, amikacin,

kanamycin, or capreomycin) is also on the increase globally (World Health Organization, 2017a). A total of 8,014 cases of XDR-TB were reported by 72 countries, with 75% of cases from the WHO European and South-East Asia regions, with the largest numbers of XDR-TB being reported from India, China, Belarus, South Africa and Ukraine.

In May 2014, the 67th World Health Assembly endorsed the WHO End TB Strategy, which set bold targets and envisions a TB-free world. This strategy was adopted by United Nations (UN) member states, and governments called for the rather ambitious 2030 targets for ending the TB epidemic, with a 90% reduction in TB deaths compared with levels in 2015 (World Health Organization, 2014). Accordingly patient-centred care and prevention, and supportive systems targets, were placed alongside research and innovation. This recognized that apart from political commitment and strengthening of national TB programs, achieving substantial reductions in TB mortality and incidence will require development and evaluation of new diagnostics, treatment regimens and vaccines, and at the same time ensuring rollout with universal access to, and the optimal use of existing tools. High TB burden countries such as Brazil, India, China, South Africa and Russia have thriving technological and pharmaceutical industries and increased investments are required by the public and private sectors into local pharma focused on development of new TB tools.

In light of the current slow progress in global TB control efforts, achieving the ambitious WHO End TB (World Health Organization, 2014) targets appears to be almost impossible. It has been long recognized that the global TB epidemic will only be brought under control if the underlying socio-economic determinants are addressed seriously by all governments (Grange and Zumla, 1999; Grange et al., 2009). TB is a disease of poverty thriving within communities that are disadvantaged socio-economically, are marginalized and have poor access to good quality health and social services (Grange et al., 2009; Raviglione et al., 2012). The risk of TB is further increased by other factors such as malnutrition, poor housing and sanitation, tobacco smoking, alcohol use and diabetes, and poor access to care (Ortblad et al., 2015). TB patients have to bear loss of income, and costs associated with illness and lack of social protection, resulting in a vicious cycle of poverty and disease (Grange and Zumla, 1999). Between 2000 to 2015, 33 million people have died of TB and TB has cost the global economy an estimated 617 billion dollars (Global TB Caucus, 2018).

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In November 2017, at the first WHO Global Ministerial Conference (Petersen et al., 2017; World Health Organization, 2017b) held in Moscow on 'Ending TB in the Sustainable Development Era' the declaration and commitments made by Ministers of Health and delegates representing 114 countries (World Health Organization, 2017b) were focused on four main issues:

- *First*, to strengthen health systems so that appropriate health coverage is universal thus providing improved access to TB treatment and prevention care.
- *Second*, to ensure that there is enough financing for this and the resources are sustainable in the long term through increased national and international investment for healthcare implementation and research.
- *Third*, to increase investment in research into new tools to diagnose, treat and prevent TB.
- *Fourth* to create a multi-sectoral framework to provide accountability through tracking, auditing and constantly reviewing progress being made. A major paradigm shift in the political and funder attention for achieving global TB control will be required to attain these deliverables.

The Ministerial Declaration arising from the Moscow conference (World Health Organization, 2017b) will be taken forward further at the United Nations General Assembly (UNGA) high-level meeting on TB in September 2018. This will be 'a historic and unprecedented' meeting since it is the first ever UN meeting focused only on TB. There are high expectations much optimism that at this UNGA (UN General Assembly, 2018), all governments will show true commitment and bold leadership by contributing substantially to mobilizing and sustaining the much-needed resources for ending the global TB pandemic and achieving the WHO End-TB targets. High TB endemic countries with healthier economies, such as India, Russia, Indonesia, Brazil, China, and South Africa are expected to demonstrate the long-awaited leadership and contribute substantially to mobilizing resources for TB using innovative approaches to financing with a more diverse funding base. This will generate goodwill and encourage all high TB endemic countries to follow suit and commit the resources required to achieve the WHO EndTB strategy goals. The laudable commitment by all high TB endemic countries to the Moscow Declaration and the increased participation of their parliamentarians in the Global TB Caucus (TB, 2018a) should be followed up with stepping-up investments in their own national health programs. This will need to be twinned with a biosocial approach (Ortblad et al., 2015) to controlling TB involving social, economic, and poverty alleviation actions, with multi-sectoral coordination with other governmental sectors and involvement of civil society. The roles of regional public health and disease control institutions in all continents to support operationalization of these global TB ambitions and goals will become increasingly important. For example, the recently established Africa Center for Disease Control (CDC) (CDC, 2018) and its regional centers, working alongside other regionally relevant African programs such as the WHO Supranational Reference Laboratory Network (WHO, 2018) and The European and Developing Countries Clinical Trials Partnership (EDCTP) regional Networks of Excellence (EDCTP, 2018) could generate and enhance a tailored and coordinated approach to TB surveillance, research and control activities (Zumla et al., 2015). These in turn will support individual countries to address both national and region-specific challenges while building much needed local capacity and expertise (Zumla et al., 2015).

World TB Day March 24th 2018 provides an opportunity for the international community to reflect seriously about why, after over 25 years since TB was declared a global emergency by the WHO, TB

is today the most common single infectious disease cause of death globally? This year the Stop TB Partnership and the World Health Organization, for the first time, are leading together a joint theme for the 2018 World TB Day campaign: **"Wanted: Leaders for a TB-free world. You can make history. End TB"** (TB, 2018c; TB, 2018b). This theme is well thought out and very appropriate for visionary leaders to emerge from all continents whose efforts and commitment can eventually bring an end to millions of unnecessary deaths due to the persistent global TB pandemic. The impending UNGA high level meeting provides a unique opportunity for governments of all high TB endemic countries to take up the longstanding complex challenges of controlling the global TB pandemic and prove themselves to be **'Leaders for a TB-free world', make history and End TB!**

Author declarations

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