MAKING HEALTH A RIGHT FOR ALL:

Universal Health Coverage
and Tuberculosis

Background

Tuberculosis (TB) is widely perceived as a disease of the past. However, the latest available data from the World Health Organisation (WHO) shows a different reality. Despite progress in recent years, it is estimated that in 2012, 8.6 million people were infected and 1.3 million died of TB. More worryingly, 3 million people who developed TB last year were missed by national notification systems.[1] In addition, multi drug-resistant TB (MDR-TB) has now become a "public health crisis".[2]

Controlling this global scourge is crucial to achieving the Millennium Development Goals (MDGs). TB is currently addressed under MDG 6.C, whose target aims to halt and reverse the incidence of TB by 2015. Progress achieved in the last decade has meant a fall of 41% in mortality[3] and a significant reduction in incidence rates.

Significantly, success in response to TB has an impact on the achievement of other MDGs and in turn, achievements in MDGs can help reduce TB-related deaths. TB is one of the main causes of death amongst women of childbearing age.[4] Improving response to TB could ensure a massive impact on maternal and child health, thereby inducing progress towards MDG 4 and 5. In addition, TB remains the leading killer of people living with HIV, resulting in 320,000 deaths in 2012[5] – which accounts for nearly one in five AIDS-related deaths worldwide (see box for more information on TB/HIV co-infections). Although the race to achieve the TB target is on track in many countries, prevalence and mortality are falling too slowly overall to realise the goals of the Millennium Declaration.

While TB can affect anyone of any age, it disproportionately affects poor and marginalised communities. More than 95% of TB deaths occur in low- and middle-income countries, and most TB patients are from the poorest households. Lack of basic health services, poor nutrition, weak immune systems, and inadequate living conditions all increase the chances of infection and developing active TB among the most disadvantaged groups. These groups include people living with HIV, migrants, homeless people, prisoners, sex workers, men who have sex with men, and injecting drug-users. TB, as a disease of poverty, is a measurable indicator of equitable development.

TB not only causes devastating loss of life and immeasurable suffering, it also causes catastrophic costs for patients and their families. In addition to the direct medical costs of treating TB (consultation fees, drugs, diagnosis, and hospitalisation), patients have to support non-medical expenditures, such as travel to the nearest health centre. The WHO estimates that an average TB patient loses three to four months of work-time and up to 30% of yearly household earnings.[6]

BASIC FACTS ABOUT TB[8]

TB is an infectious disease caused by the mycobacterium tuberculosis bacillus. It typically affects the lungs (pulmonary TB), but can affect other areas as well (extrapulmonary TB). It is mainly transmitted from person-to-person through the air.

The only existing vaccine against TB, Bacille Calmette-Guérin (BCG), was developed in 1921, and has limited protective efficacy. It provides protection against severe extrapulmonary forms of childhood TB, but is unreliable in protecting against pulmonary TB, which accounts for most of the disease burden worldwide.

Since there is currently no completely effective vaccine, control of the disease relies heavily on detecting infectious cases. The most common method for diagnosing TB worldwide is sputum smear microscopy, developed more than 100 years ago. Recent developments in TB diagnostics with the use of rapid molecular tests, which can diagnose TB and drug-resistant TB within two hours using a sputum sample, show that TB is on the rise.

Treatment for new cases of drug-susceptible TB consists of a six-month regimen of four first-line drugs. The associated cost to treatment, length, and complexity of TB treatment are impeding many patients from correctly administering their regimen, and then completing the full treatment. The result is that TB bacteria can re-emerge and develop resistance to standard first-line drugs. Once a patient has developed a drug-resistant TB strain, this form can be directly transmitted to other individuals.

Treating MDR-TB and extensively drug-resistant tuberculosis (XDR-TB) can take two years or more, and requires taking drugs that are more toxic and much more expensive than those used to treat a standard case of TB. XDR-TB occurs when resistance to second-line drugs develops on top of MDR-TB, and it is practically incurable. In 2012, an estimated 450,000 people developed MDR-TB globally, with the greater European region accounting for 25% of the global burden while XDR-TB has been identified in 92 countries.[9]

TB/HIV CO-INFECTIONS

In the 1980s when TB was decreasing, the outburst of the HIV epidemic led to a major upsurge in TB cases and mortality in many countries. TB and HIV fuel each other's progression; TB has seriously undercut progress made in the response to HIV/AIDS. Due to their weakened immune systems, people living with HIV are up to 37 times more likely to develop TB than people who are HIV-negative.[10] In 2012, 1.1 million (13%) of the 8.6

million people who developed TB worldwide were HIV-positive; 75% of these HIV-positive TB cases were in the WHO African region.[11] Globally, there were an estimated 320,000 HIV-associated TB deaths in 2012.[12] Without proper treatment, seven-out-of-ten people living with HIV who develop TB will die.[13]

Reinforcing mechanisms of collaboration between TB and HIV/AIDS programmes is essential to

reduce the burden of TB among people living with HIV. Necessary measures include: testing TB patients for HIV, providing antiretroviral therapy (ART) and TB preventative therapy to people living with HIV, providing HIV prevention services for TB patients, intensifying TB case-finding among people living with HIV, and controlling the spread of TB infection in health-care and congregate settings.

TB destroys the ability to earn money or subsist through work, and therefore traps the most vulnerable in a poverty-disease-poverty circle. At a macroeconomic level, TB significantly hampers the economic development of low- and middle-income countries. According to a World Bank study,[7] the implementation of TB care programmes yields a 10-to-1 economic benefit, meaning that the countries with the highest TB burden could earn about 10 times more than what they spend on TB services.
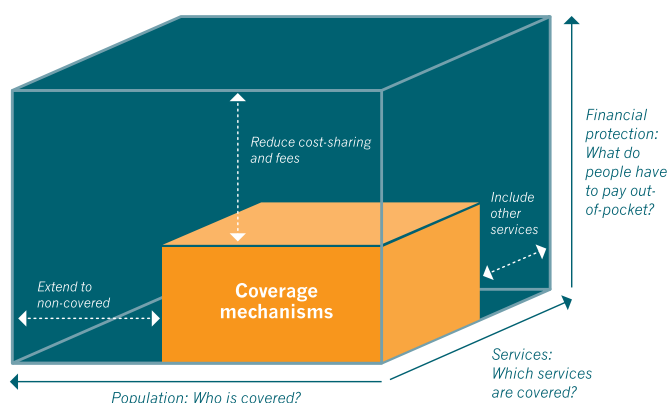

Man being tested for HIV, Cameroon. Due to their weakened immune systems, people living with HIV are up to 37 times more likely to develop TB than people who are HIV-negative. At least one third of the 35.3 million people living with HIV worldwide are infected with latent TB.

UNIVERSAL HEALTH COVERAGE

Universal health coverage (UHC) is ensuring that all people have access to health information and services (promotive, preventive, curative, and rehabilitative) of sufficient quality to cover the variety of their needs (including sexual and reproductive health, HIV, TB, and malaria), while also ensuring that people do not suffer financial hardship when paying for these services.

Towards universal coverage

Reduce cost-sharing and fees

Include other services

Extend to non-covered

Coverage mechanisms

Financial protection: What do people have to pay out-of-pocket?

Services: Which services are covered?

Population: Who is covered?

UHC is to be reached by ensuring health services are:

- **Available** – Facilities and skilled health workers must be available in sufficient quantity;

- **Accessible** to all – Those who need the services should get them, not only those who can pay for them;

- **Acceptable** – Services should be respectful of medical ethics and culturally appropriate;

- **Affordable** – The cost of using care must not put people at risk of financial hardship;

- **Quality** – Services must be sufficient to improve the health of those receiving services.

Note: We define UHC according to the core principles adapted from the 2010 World Health Report; consistent with a Primary Health Care approach (WHA62.12) and Committee on Economic, Social and Cultural Rights – CESCR comment n°19; principle of person-centeredness, ensuring comprehensiveness and integration, continuity of care, and meaningful participation of patients, families and communities.

Situating response to TB within UHC

Inequality in access to TB care, slow rates of decline and the spread of drug-resistant TB require innovative solutions to boost the fight against TB, especially among the poorest and most marginalised groups, and to respond to the emergence of drug-resistant TB.

While discussions on the post-2015 agenda are ongoing, calls for UHC have recently gained momentum. UHC seeks to ensure that all people can afford to obtain the health services they need without suffering financial hardship.

Current debates on UHC must recognise that exclusion and equity gaps are often not accidental, but are the result of a range of factors. These include: neglect or political apathy towards particular groups, the deliberate exclusion of a group as an expression of discrimination, and attempts to achieve other policy objectives. The establishment, and implementation of UHC policies in many developing countries, combined with the increasing interest from UN agencies and donor(s) represents an important opportunity for the response to TB, and the eventual elimination of TB as a public health threat. In low- and middle-income countries in particular, governments need to decide what interventions should be prioritised when defining UHC policies, and how they will be delivered and financed from their often, very limited health budgets.

Taking into account the number of people dying as a result of TB every year, as well as the social and economic impact of the disease, it is key to ensure TB prevention and care are fully recognised as a part of UHC, as well as included in the basic health services provided. By reaching out to those people who currently lack access to healthcare, UHC has the potential to accelerate progress in the fight against TB. Complementary efforts to address the social and economic determinants of TB, as well as increased financing for research and development (R&D), are crucial if we are to reach zero TB deaths, and prevent new infections.

Multi-Drug Resistant Tuberculosis (MDR-TB) patient in Rayong province, Thailand, receiving therapy during a home visit. Improper use of antibiotics in chemotherapy of drug-susceptible TB patients is a key cause of MDR-TB, a more virulent form of TB. The WHO estimates that there were about 450,000 new MDR-TB cases in the world in 2012.

Framing UHC that delivers for TB

1. WHO HAS ACCESS TO SERVICES IS KEY

Physical, social, and cultural barriers continue to hamper access to TB prevention and care. Stigma and discrimination are both a cause and a consequence of these barriers. Approximately one third of the people estimated to be affected by TB have not been diagnosed nor prescribed any treatment.[14]

Responsibility for service provisions ultimately lies with governments themselves. By recognising the goal to achieve the highest attainable standard of health for all, governments should provide health services to all inhabitants, without discrimination. However, national governments in developing countries often lack the resources or are unwilling to invest in health programmes targeting vulnerable and socially excluded groups. Therefore, international financing support to TB programmes and policies have been essential. Despite this, donors are gradually reducing funding available to countries that have graduated into middle- or high-income status. China and India, where the majority of TB cases currently lie, as well as countries in Eastern Europe and Central Asia, which bear a quarter of the global MDR-TB burden, will need to fill this gap with domestic investments.

To ensure the realisation of the principle of universality, intrinsically contained in the concept of UHC, and guarantee real access to health services for all, some key interventions that specifically target vulnerable groups and encompass TB prevention, diagnosis and treatment should be included within UHC. Targeted action to enhance the understanding of TB would have a huge impact in scaling up access to TB services. These actions should tackle risk factors, symptoms and consequences among both high-risk groups and health workers; they should also ensure the provision of information about the possibility to access relevant health services. In addition, systematic screening of high risk groups could improve early detection, and therefore reduce TB transmission.

Countries that have graduated to middle income status, such as India, bear a quarter of the global MDR-TB burden. Two people die of TB every three minutes in India, which accounts for 26 percent of the cases globally.

2. ENSURING ACCESSIBILITY AND AFFORDABILITY

The necessity to ensure free TB care for all is very much linked with accessibility. While the cost of TB diagnosis and treatments are free in many countries, transport to access health facilities, payment for a consultation with a health professional, and other indirect costs are often unbearable for patients.

TB patients have to support significant costs related to their pathology and treatment. The costs associated with the capacity to access health services are among the major causes of treatment interruption, especially amongst the poorest and most marginalised groups. Noncompliance with treatment increases the likelihood to develop more serious symptoms and the insurgence of developing drug resistance, thus making TB more difficult to cure. Consequently, patients are more likely to transmit the disease to others as they become more infectious again, and in turn come into contact with more people.

The ability to enjoy free access to healthcare services as envisaged by UHC would not only ensure patients observe the necessary treatment, but would also increase medical visits and the number of diagnosed TB cases, thus limiting the spread of TB by those unwittingly carrying the disease. At the same time, the possibility to access free health care at the point-of-care (point-of-use) could reduce stigma and discrimination that are associated with the costs borne by people affected by TB. In this sense, eliminating the direct cost carried by the patient for the prevention, diagnosis and treatment of TB, including drug-resistant forms, is an essential step to ensure that national administrations provide free TB care, but it is not sufficient to achieve zero costs for TB patients. The objective for UHC is then to ensure that the needs of the patient are made central, notably by addressing non-medical costs supported by TB patients during treatment, including loss of income. This patient-centred approach should include the provision of food incentives, psycho-social support during treatment, and transportation vouchers from home to the health centre.

The contribution of UHC to the fight against TB could also be beneficial for national budgets. In fact, in the medium-term, the cost of including TB under UHC translates into value for money, as diagnosing and treating TB cases early is much more cost-effective than the future costs related to the rising rates in drug-resistant TB. This surplus could be used to finance the adoption of TB-sensitive social protection measures to protect patients from non-medical costs of TB, or to invest in addressing other health issues.

3. AVAILABILITY AND QUALITY OF TREATMENT IS CRITICAL

Due to the length of treatment and extensive side effects,[15] the TB regimen is difficult to follow with accuracy and continuity.

Firstly, constant provisions of TB drugs to health centres, including those in rural or isolated areas, should be ensured. However the availability of treatment alone is not sufficient. Healthcare systems often do not provide assistance to patients during their treatment, thereby increasing the risk that treatment is insufficient or interrupted. In some countries, there are frequent drug stock-outs, and the drugs available may be of poor quality. Incomplete and inadequate treatment is the most important factor leading to the development of drug-resistant TB, suggesting that it is often a man-made tragedy.[16]

TB is most effectively treated when there is a functional public health system capable of providing drugs at specialised point-of-care centres, and establishing regular contact with patients. This entails follow-up for several months in order to ensure the continuation of a standardised treatment regimen, and the evaluation of treatment outcomes. Quality and continuity of medical treatments are key to tackling the global TB burden. UHC could improve the level of supervision and ensure necessary continuity in TB treatment. UHC should then integrate supervised treatment of TB, including the direct observation of therapy, if necessary. Helping patients to take their drugs regularly and to complete their treatment is the best way to achieve a cure and prevent the emergence of drug-resistance.

8.6 million estimated
people infected with TB in 2012

4. DEVELOPING COORDINATED APPROACHES

The risk of contracting TB increases due to other health conditions, such as: HIV, AIDS, diabetes, malnutrition (protein-energy deficiency), and unhealthy behaviours including smoking, alcohol, and drug abuse. TB, therefore, is affected by other health issues and thus needs to be dealt with in a coordinated way.

To eliminate TB, it is critical to address the disease in conjunction with other health and social issues. UHC could ensure, through primary healthcare, such a coordinated approach. Such an approach would facilitate: reducing the prevalence of TB risk factors in the population, integrating screening for relevant co-morbidities and risk factors, identifying risk groups, conducting intensified case finding, and other joint interventions to reduce HIV-related TB morbidity and mortality.

Aspects of TB that fall outside UHC

Even though UHC has the potential to improve the health situation for all, including TB patients, a holistic approach is necessary to address the social and economic determinants of TB, including poverty, poor housing, malnutrition and undernutrition, poor education, and gender inequalities. Coordination at a national level among ministries of health, finance, social affairs, labour, and education are necessary to ensure the eradication of TB.

Additional efforts are especially needed in the field of research and development, in particular with regards to the development of effective new TB vaccines, diagnostics, and treatments. For instance, the only TB vaccine available is 90 years old and fails to protect children and adults against the most common form of the disease, pulmonary TB. Moreover, children who are HIV-positive cannot be given the vaccine because of their weakened immune systems.

Correct diagnosis is essential for reducing TB transmission and improving treatment outcomes. We currently lack a point-of-care TB diagnostic tool. This would allow for direct, community-level care, which ensures that patients do not have to wait for treatment, or travel to a health facility. Most of the world still diagnoses TB by analysing sputum under a microscope. However, microscopes detect only about half of all TB cases and are unable to identify drug resistance. Children often have difficulty in coughing up the sputum needed for the test and, even when they do, they produce fewer bacteria, making it harder to detect TB under a microscope. The diagnosis suffers the same limitations when testing people with HIV, whose sputum does not contain enough bacteria to detect TB. Other diagnosis methods currently in use all present different limitations: either they are not always reliable, slow in producing results, or too costly. Research is, therefore, desperately needed to develop a simple point-of-care test that could be used in a variety of settings, including rural areas, and provide quick results determining if a person has TB and whether or not that strain is drug-resistant.

Finally, only a few new TB drugs have been developed in over 40 years.[17] Current treatment of TB takes six-to-nine months which, when combined with the serious side effects the drugs, increases the likelihood that patients will discontinue treatment. For these reasons, shorter treatment regimens should be developed if we are to increase the likelihood that patients will complete their treatments and avoid the development of drug resistance.
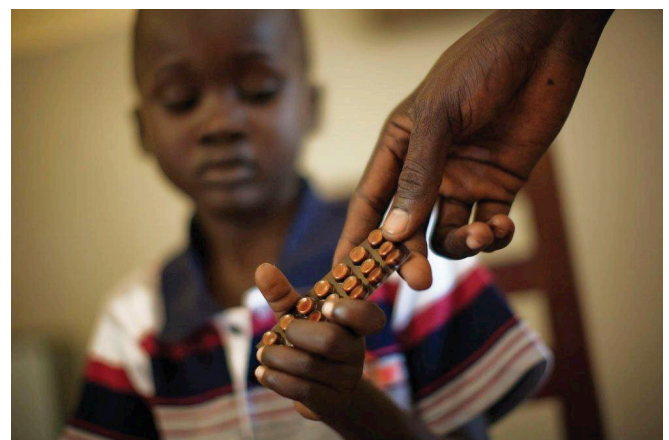
Child receiving TB medication in South Sudan. TB illness in children is difficult to diagnose due to non-specific symptoms. Current TB vaccines protect young children against the most severe forms of TB, but do not prevent transmission from infectious contact.

Conclusions

In spite of efforts made in recent years, TB remains a major public health issue that needs to be urgently addressed in order to avoid the proliferation of drug-resistant TB. The achievement of UHC could give a major boost to the fight against this global pandemic by ensuring full access to TB prevention, diagnosis, treatment and care, and by eliminating medical costs for TB patients. To take advantage of its potential in combating TB, UHC should include TB-sensitive measures and must be accompanied by progress in the research and development of new TB vaccines, diagnostics, and drugs.

MAIN MESSAGES

- Ensure that the fight against TB is given adequate relevance within the concept of UHC. It must be included within a target, related to health outcomes in a post-2015 framework health goal, with a focus on reducing TB deaths, TB incidence, and catastrophic expenditures for families affected by TB;

- Special attention should be paid to poor, marginalised, and disadvantaged groups that are bearing the burden of TB. Access to services should be guaranteed to everybody and data for UHC must be disaggregated for measuring progress among harder-to-reach groups with poor health outcomes;

- Affordability of TB prevention, diagnosis and treatment is essential but needs to be accompanied by social protection measures to compensate for related non-medical costs of TB;

- Early diagnosis and continuity of treatment are critical to defeat TB. These elements should be given adequate attention when building UHC policies;

- Ensure effective joint intervention to address TB-HIV co-infection and other health determinants of TB, such as: diabetes, malnutrition, alcoholism, and drug addiction;

- Civil society, particularly marginalised groups and affected communities, must be meaningfully engaged at all levels in the design, monitoring, and evaluation of national health systems, as well as international health goals; and,

- Without investments in TB R&D to develop and roll out new tools, progress will not be sustainable.

1   World Health Organisation (2013) Global TB Control Report 2013, Geneva: WHO.

2   Ibid.

3   Tuberculosis: Global situation and trends, WHO Global Health Observatory, available at http://www.who.int/gho/tb/en

4   World Health Organisation (2013) Factsheet: Women and Tuberculosis, Geneva: WHO.

5   World Health Organisation (2013) Global TB Control Report 2013, Geneva: WHO.

6   Data published in June 2002 at the 4th World Congress on Tuberculosis.

7   Laxminarayan, R., et al. (2007). Economic Benefit of Tuberculosis Control [Policy Research Working Paper 4295]. DC: The World Bank. Available at: http://www.who.int/management/EconomicBenefitofTuberculosisControl.pdf

8   Global Tuberculosis Report 2012.

9   World Health Organisation (2013) Global TB Control Report 2013, Geneva: WHO.

10 Global tuberculosis report 2013.

11 Ibid.

12 Ibid.

13 Ibid.

14 Partnering and public health practice: Experience of National TB Partnerships, STOP TB Partnership and World Health Organisation, available at: http://www.stoptb.org/assets/documents/countries/partnerships/stop_tb_layout_low_res_final.pdf

15 Once diagnosed with TB, patients should be treated with drugs for 6-8 months, taking several pills every day and experiencing potentially serious with side effects, including vomiting, diarrhoea, headaches, dizziness, and depression.

16 Sharma and Mohan, Multidrug-resistant tuberculosis: a menace that threatens to destabilize tuberculosis control, Chest. 2006 Jul;130(1):261-72, Division of Pulmonary and Critical Care Medicine, Department of Medicine, All India Institute of Medical Sciences, New Delhi, India.

17 Bedaqualine was approved by the Food and Drug Administration in the USA late last year but is only prescribed in specific and limited cases. Additionally, new drugs are coming down the pipeline, but no large-scale availability is planned yet.

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