Opinion

Prioritising tuberculosis treatment for incredible results

By Dr Bjorn Lomborg &
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WITH news around the world focussing on the coronavirus (CONVID-19) crisis, it's easy to forget that one of the most common killers in Ghana and globally is a disease we already have a treatment for: tuberculosis (TB).

Approximately, a quarter of the world's population has been infected, although the majority don't ever develop the active disease. Individuals with tuberculosis often remain undiagnosed and untreated, able to carry it on and infect others.

The World Health Organisation (WHO) estimates that TB is responsible for five per cent of total deaths every year in Ghana. It affects mostly the working age population, with 73 per cent of cases between the ages of 15 and 44.

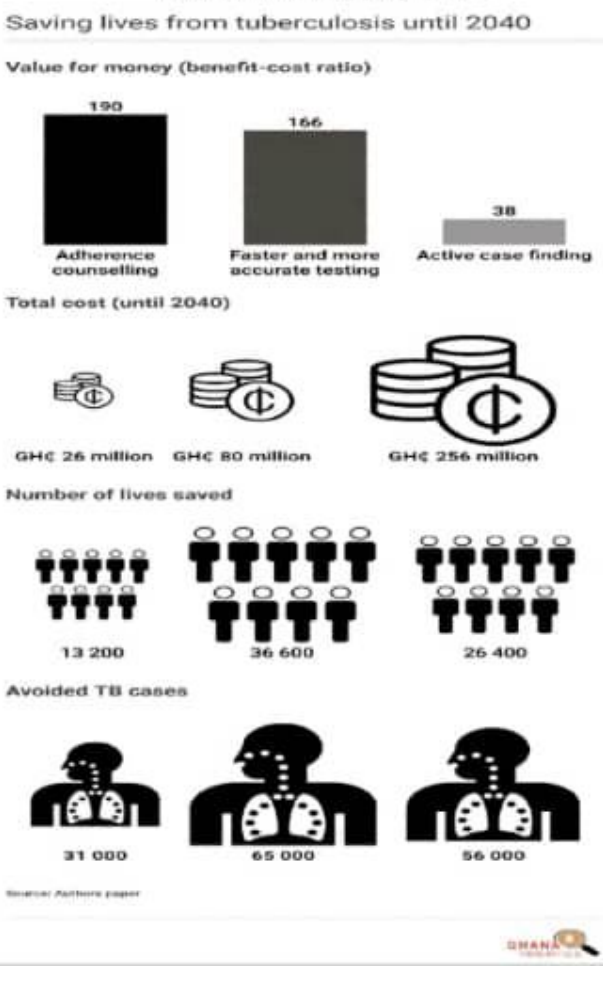
That's why TB is not only a health issue, it also impacts on the overall productivity of the Ghanaian economy.

Even with Ghana's economic progress and a notable increase in public spending in the past years, resources are limited and prioritising the right initiatives is a challenge. Which policies will do the most good for every cedi spent?

This is what Ghana Priorities, a collaboration between the National Development Planning Commission (NDPC) and the Copenhagen Consensus, has been working to establish.

Twenty-eight teams of economists are analysing the most promising policy proposals for Ghana, estimating the costs and quantifying the economic and social benefits.

The results of these studies, which scrutinise all sectors of government, are now being published for the benefit of all.



Strategies

To identify the best strategies to combat tuberculosis, Jamie Rudman and Rein Houben from the London School of Hygiene & Tropical Medicine; National Tuberculosis Control Programme Manager, Yaw Adusi Poku; Saleema Razvi and Brad Wong from the Copenhagen Consensus studied three important interventions to dealing with the disease burden: active case finding in high-risk populations, improved speed and accuracy of diagnosis through the implementation of molecular diagnostic tools, as well as education and counselling, alongside.

Directly observed treatment short-course (DOTS) to make sure those receiving TB treatment adhere to the necessary treatment. Altogether, they found these proposed initiatives would have a phenomenal impact on reducing the burden of long-term illness on households and the healthcare system.

Active case finding through community outreach and targeted screening and testing for tuberculosis uses chest X-rays and molecular testing with GeneXpert equipment for those that present with symptoms indicative of TB, specifically targeting high-risk populations including miners, refugees, and vulnerable urban populations.

Test-positive individuals are registered and linked to a health facility to start treatment. The intervention aims at reaching 150,000 individuals in these high-risk groups, with the goal of identifying and giving treatment to 33 per cent of total cases among these vulnerable populations by 2025.

Every cedi spent on this initiative yields benefits worth GH¢190, making this the most cost-effective solution on the wide spectrum of public health policies.

The total cost of additional screening and treatment is estimated at GH¢256 million by 2040. However, this initiative will have a significant impact on the burden of tuberculosis disease, with approximately 5,000 cases and 2,000 deaths avoided during the initial six years of scale-up of the programme. In the longer term, the impact is even more impressive.

By 2040, the intervention will help avoid 56,000 cases and 26,400 deaths with benefits for society worth GH¢10,000 million. Actively identifying tuberculosis cases this way equates GH¢ 38 for every cedi invested in the intervention.

A sputum transportation system to link 1,000 health facilities to 126 existing molecular testing sites is another initiative that has already been implemented in Ghana with good results. The researchers studied the effect of transporting samples from suspect cases in local healthcare facilities, to facilities with on-site GeneXpert testing capabilities, for faster and more accurate GeneXpert testing, hence reducing the need for individuals to travel to obtain TB test results, and increasing GeneXpert test coverage at the national level to 90 per cent by 2025.

They estimated the total costs of this initiative at GH¢80 million over two decades. However, the scale-up of molecular testing will have a major impact on the burden of disease, with around 65,000 tuberculosis cases avoided and 36,600 lives saved by 2040.

The total social and economic benefits of the intervention would amount to more than GH¢13,000 million, yielding a return of GH¢166 for every cedi spent.

Education, counselling

Even with the improved diagnosis methods, individuals diagnosed with TB are often lost to follow-up once enrolled on DOTS. Therefore, the researchers also assessed the impact of education and counselling of tuberculosis to increase treatment adherence and overall completion and success.

This intervention was estimated to lead to an additional 16 per cent increase in the proportion completing treatment successfully, with 31,000 TB cases and 13,200 deaths avoided.

The costs of training course development, and nurse training time, as well as costs incurrent by individuals with TB and their households are estimated at GH¢ 26 million in total, but the total benefits are worth almost GH¢ 5 billion.

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Tuberculosis, if treated in a timely fashion, has a high cure rate. Despite the moderate cost of screening and treatment, it is still the number one infectious killer in the world and one of the most common ailments in Ghana.

The benefit-cost ratios for tackling TB are some of the largest in the entire Ghana Priorities project, which shows the importance and the potentials of addressing this disease as a priority.

Accurately identifying individuals with TB and making sure they follow the treatment has an incredible potential for saving lives, and the government could make a large impact on Ghanaians' lives with a holistic approach that includes all three of these potentially highly efficient policies.

The writers are the President of the Copenhagen Consensus and the Manager of the National TB Control Programme, respectively.