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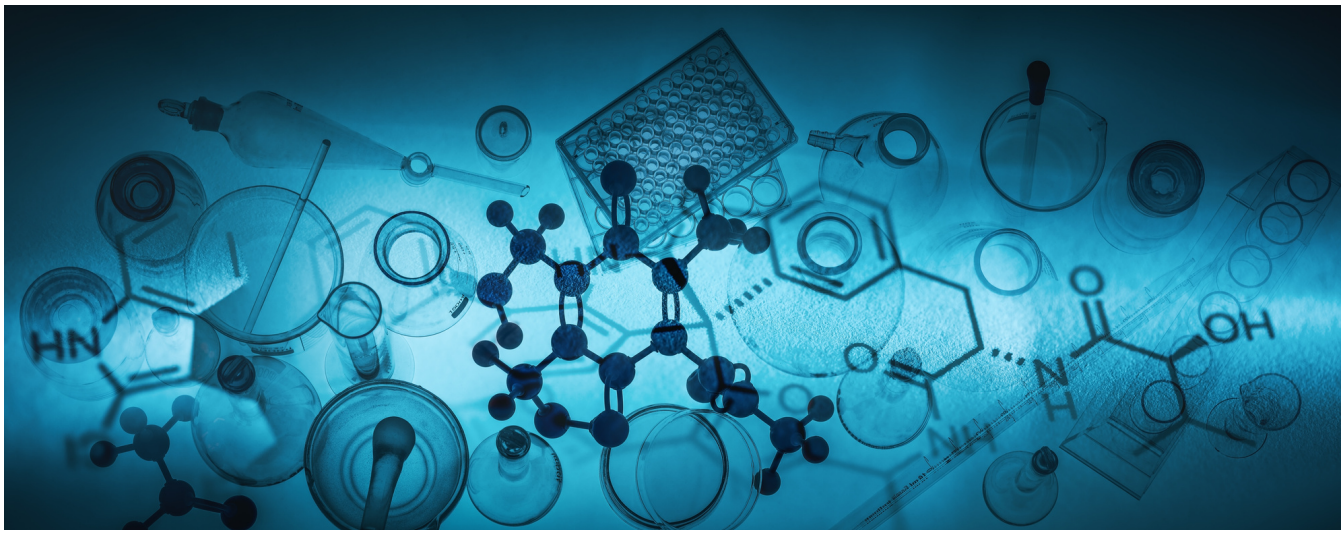
THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

We at the Mueller Health Foundation want to wish everyone a healthy and safe Thanksgiving. Our team is very grateful for all of the hard work that our grantees, partners, and the global TB community is doing everyday to help win the fight against tuberculosis.

We also want to say a special thank you to all of the TB patients, who are sharing their experience and stories with us in the hope of encouraging others to get tested for TB and to give strength to those going through TB treatment.

Stay tuned for more updates!

LATEST NEWS: SHOWCASING STORIES OF TB SURVIVORS

We at The Mueller Health Foundation continue to be deeply committed to sharing personal stories and giving a voice to TB patients, TB survivors, TB practitioners, and all the friends and family members of the people who have been affected by the disease. TB Alert, a charity focused on TB in the United Kingdom, has put together a wonderful collection of stories and this month we would like to highlight Manisha's story:

At the age of 24, Manisha was diagnosed with TB, which was a shock as she is an active person with a healthy lifestyle. It began with just a cough that became constant over time. Prior to her diagnosis, she was given several courses of antibiotics, as the doctor's suspected a chest infection, but Manisha continued to lose a significant amount of weight. Finally, after three months, she was given a chest x-ray, which identified that she had TB. Doctors were baffled as to where she got it from. She was signed off sick from work and given a six-month treatment. Everyone who she has been in close contact with would also need to be checked. Her two-year-old nephew was given a three-month treatment course as a precaution, even though he tested negative for tuberculosis. Manisha's main symptoms while on treatment were fatigue, hair loss and skin problems. One thing the doctors warned her about was that she would lose weight during the treatment, but to their surprise she was instead putting on weight every time she had a check up. Manisha came to realize that during her treatment she was counting down the days until her treatment would be over, but the support from her friends and family had helped her to get through this. After she completed her treatment, she felt relief. She also gained a new perspective in life of making the most of it. She has also learned to be patient with the recovery process. Her main advice to other TB patients is: "From my experience I would say don't be afraid of having TB. If it is diagnosed early you have a high curable rate. I came to realise as I shared my story that TB was more common than I had first thought. Positive attitude, healthy diet, strong will and good support will help you get through this. At the end you will see that it is a great achievement that you have got through this, be proud." To read her full story please follow the link here: https://www.thetruthabouttb.org/tb-stories/manisha/

For more news, please also take a look at our top 3 picks for **November** in this newsletter, where we highlight novel research findings and news around the prevention and treatment of tuberculosis around the world.

The Mueller Health Foundation

MHF TOP PICKS FOR NOVEMBER

Every month, we at the Mueller Health Foundation like to showcase interesting news and updates in the field of tuberculosis (TB). Below are our top **3** picks for **November:**

1.Study on Tuberculosis Testing and Latent Tuberculosis Infection Treatment Practices Among Health Care Providers in the United States, 2020–2022

To assess TB-related practices among health care providers (HCPs) in the United States, the CDC analyzed data from the 2020–2022 Porter Novelli DocStyles surveys. They found that approximately only one half (53.3%) of HCPs reported routinely testing non–U.S.-born patients for TB, and of those who did, 35.7% exclusively ordered recommended blood tests, 44.2% exclusively ordered skin tests, and 20.2% ordered TB skin tests and blood tests. One third (33.0%) of HCPs reported prescribing recommended short-course treatment regimens for latent TB infection (LTBI), and 4.0% reported doing none of the treatment practices available for patients with LTBI (i.e., prescribing short-course regimens, longer course regimens, or referring patients to a health department). Further efforts are needed to identify and overcome barriers for providers to test for and treat persons at risk for TB. To learn more, you can access the full study at: https://www.cdc.gov/mmwr/volumes/72/wr/mm7244a2.htm?s_cid=mm7244a2_w

2. New TB Treatments Could Tackle the Disease Without Wrecking the Microbiome

In this study, the researchers conducted a retrospective analysis of the impact of tuberculosis treatment regimens on the respiratory microbiome by analyzing longitudinally collected sputum samples obtained as part of two clinical trials that evaluated the efficacy of six experimental tuberculosis treatment regimens against that of the standard tuberculosis treatment regimen. The findings showed that the standard treatment regimens for tuberculosis, consisting of isoniazid, pyrazinamide, rifampicin, and ethambutol, had a marginal impact on the respiratory microbiome and did not significantly impact the diversity. Additionally, the study found that the abundance and diversity of the respiratory microbiome underwent a pattern of fall and recovery that was similar to predator-prey interactions, indicating the initial sensitivity and developing resistance of the microbiome to the antibiotics. The inclusion of moxifloxacin into the regimen and increasing the rifampicin dosage substantially impacted the microbiome, specifically the Mycobacterium levels. However, the regimen comprising 20 mg/kg of rifampicin resulted in the recovery of the microbiome within three months. The results highlight the possibility of improving tuberculosis treatment without harming the commensal bacteria in the respiratory microbiome. To learn more, you can read the paper here: https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(23)00191-X/fulltext

3.Ending TB Is Within Reach — So Why Are Millions Still Dying?

While there have been significantly positive innovations made in TB testing and shortening TB drug-regimens, the prevailing issue remains that people in low-income countries simply do not have access to these innovations and the costs for use continue to be prohibitively high. While some improvements have been in the form of a new potential vaccine candidate and some reduction in drug pricing, many countries still lack molecular testing sites, have insufficient staff members trained to spot the disease, and the existing stigma around the disease prevents patients from speaking about their diagnosis with others. This prevents family members and close contacts to be tested for TB and to receive treatment, thereby increasing the spread of the disease. You can learn more and access the full article here:https://www.nytimes.com/2023/11/06/health/tuberculosis-tb-treatment-vaccine-diagnosis.html

DID YOU KNOW?

The World Health Organization (WHO) released the new *Global Tuberculosis Report for 2023*, which contains the latest global data on tuberculosis for the year 2022. Below, we have summarized key findings from the report:

- In 2022, tuberculosis was the world's second leading cause of death from a single infectious agent, after coronavirus disease (COVID-19), and caused almost twice as many deaths as HIV/AIDS.
- The reported global number of people newly diagnosed with TB was 7.5 million in 2022. This is the highest number since WHO began global TB monitoring in 1995, above the pre-COVID baseline (and previous historical peak) of 7.1 million in 2019, and up from 5.8 million in 2020 and 6.4 million in 2021. The number in 2022 likely includes a sizeable backlog of people who developed TB in previous years, but whose diagnosis and treatment were delayed by COVID related disruptions that affected access to and provision of health services.
- The net reduction in the global number of deaths caused by TB from 2015 to 2022 was 19%, far from the WHO End TB Strategy milestone of a 75% reduction by 2025. Progress is much better in the WHO African and European regions, and 47 countries achieved reductions of at least 35%.
- Globally, an estimated 410,000 people developed multidrug-resistant or rifampicin- resistant TB (MDR/RR-TB) in 2022. The number of people diagnosed and started on treatment was much lower: 175,650 people in 2022, equivalent to about two in five of those in need and still below the pre-pandemic level of 181,533 people in 2019.
- Treatment success rates have improved in 2022 to 88% for people treated for drug-susceptible TB and 63% for people with MDR/RR-TB.
- About 50% of TB patients and their households face total costs (direct medical expenditures, non-medical expenditures and indirect costs such as income losses) that are catastrophic (>20% of annual household income), far from the WHO End TB Strategy target of zero. This shows that there are major economic and financial barriers to accessing and completing TB treatment.

Information Source:
https://iris.who.int/bitstream/handle/10665/373828/9789240083851-eng.pdf?sequence=1
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