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**Elizabeth Glaser
Pediatric AIDS
Foundation**

THE ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION CONFRONTS THE TB EPIDEMIC IN CHILDREN

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In 2017, there were an estimated **10 million people living with TB** throughout the world



In 2017, an estimated **1 million children under age 15** developed active TB disease, but nearly 460,000 were reported, leaving more than **50% undiagnosed or unreported**



Over **230,000 children died from TB in 2017**, including over **40,000 HIV/TB co-infected**



Around **70% of those infected with TB** are living in the Africa region

The Tuberculosis Epidemic

Worldwide, Tuberculosis (TB) continues to be one of the top 10 leading causes of death. In 2017, an estimated 10 million people were living with TB throughout the world.¹ Drug-resistant TB – a strain unresponsive to effective treatment options – continues to affect a large proportion of these individuals and is considered a major public health crisis. About 1.7 billion people, 23% of the world's population, are estimated to have a latent TB infection, and are at risk of developing active TB disease.*¹

In 2017 alone, this ancient and thriving disease took the lives of nearly 1.6 million individuals, 15% of whom were children under the age of 15.¹ Compared to adults, children infected with TB are more likely to become sick and die from the disease, and yet 55% of the estimated one million children who become sick with TB each year are undiagnosed or unreported.¹

TB and HIV

TB is the most common opportunistic infection in people of all ages living with HIV and HIV is a leading risk factor for contraction of TB. People living with HIV who are also infected with TB are more likely to develop active TB disease than those who are HIV-negative. Drug resistant TB is almost twice as common in people living with HIV compared to those who are HIV-negative (this form of TB is also highly lethal). The impact of HIV/TB co-infection can be more dramatic in children, as co-infected children have higher rates of mortality than those with TB infection alone.

Prevention and treatment of HIV and TB in children and adults share common challenges. Children are more difficult to diagnose with TB and HIV than adults; child-friendly medicines are not made widely available; and older children and adolescents are often poorly served by adult service delivery models. Antiretroviral treatment (ART) significantly reduces the risk of TB in HIV-positive individuals of all ages, but a significant proportion of those living with HIV are not on treatment - this treatment gap is further pronounced in children and adolescents.

While much progress has been made in the fight against HIV and AIDS, TB-HIV co-infection jeopardizes that progress, especially among children. However, through a well-designed, resourced, and coordinated response, we can build progress toward eliminating these epidemics.

* Many more children and adults are infected with TB without developing active disease. This is known as latent TB infection (LTBI). Children with LTBI are at higher risk than adults of developing active TB. It is important to prevent active TB disease in all exposed to TB through contact with a TB-infected person. It is also critical to provide preventive therapy to HIV-positive children, as they are particular risk of developing active TB.

The Elizabeth Glaser Pediatric AIDS Foundation Working toward Progress in Childhood TB Prevention, Diagnosis, and Treatment

Integrating TB, HIV Prevention, Care, and Treatment and Maternal and Child Health (MCH)

Services: There are many missed opportunities to identify, prevent and treat TB in children and adults, in part, because TB services are often siloed – unaffiliated with existing health services. Integrating TB, MCH and HIV/AIDS services can offer increased expansion of TB prevention, diagnosis, and treatment, new opportunities to diagnose people living with HIV, while providing comprehensive health care to children, women, and families.

The Elizabeth Glaser Pediatric AIDS Foundation seeks to end global pediatric HIV/AIDS through prevention and treatment programs, research, and advocacy. Due to the overlapping epidemiology of TB and HIV and the mutual benefits of a coordinated response, EGPAF has scaled-up adult and childhood TB identification, prevention, diagnosis, and treatment through integrating TB into many of our existing supported maternal and child wellness and HIV services. We also work with community health volunteers across our programs to provide TB education and to identify harder-to-reach TB cases within communities and households.

Ensuring Universal Access to TB Identification and Linkage to Care through Capacity Building:

For years, EGPAF has worked alongside policy makers, partners, and within clinic settings to transfer policy into practice. We have recruited clinical and community health worker staff and trained clinicians, nurses, laboratory personnel, and community health workers on how to identify TB in adults and children; collect sputum for diagnosis; and link a TB-suspected or -infected individual to prevention and treatment services. We have created and harmonized screening tools to better enable health workers in supported settings to identify TB suspects in routine clinic visits. Our capacity-building efforts have resulted in several sites with more highly trained and supported staff that function as training facilities for health workers in other settings (referred to as Centers of Excellence), thereby allowing trained clinicians to scale-up similar models of effective care in their own settings. We have also enhanced skill and technology at the national level to more accurately capture TB clinical service data; aiding in building well-informed and sustainable national programs to eliminate TB.

Implementation of Innovative Solutions to Decentralize Childhood TB Diagnosis and Treatment:

Until recently, the ability to diagnose and treat TB with medicines appropriate and tolerable to children did not exist. We now have tolerable, palatable, effective, and affordable treatment options, available in fixed-doses (creating greater ease of use, while reducing risk of drug resistance), for children to both treat active TB and prevent latent TB from becoming active. Although we still do not have an ideal diagnostic, we have access to diagnostic technology that is more sensitive to detect difficult-to-diagnose childhood TB.¹ These innovations are, however, not widely implemented in locations facing the greatest need.

With funding from Unitaid, EGPAF is implementing the Catalyzing Pediatric TB Innovations (CaP TB) project in nine African countries and India. From 2017 to 2021, CaP TB will allow EGPAF to both procure and implement the latest diagnostic technology and drug formulations for children. Through this award, EGPAF will continue to build sustainable models that support decentralization of TB care, integrate TB into pediatric health care entry points, and work at the community level to provide household TB screening and education. Through CaP TB, EGPAF aims to double pediatric TB case detection and treatment initiation over the next three years.

Enhancing TB Programs through Evaluation and Research: EGPAF works within supported settings to enhance sustainability of effective practices, ensuring many more children and adults with latent TB, presumptive TB, or active TB are getting the care they need. Through CaP TB, EGPAF is prioritizing documentation of best practices and will implement two research studies: one will evaluate the impact of integrating TB services into other services like MCH and ART on improved identification of TB among children and subsequent linkage to care; the other will focus on community-based active contract tracing for TB and preventative therapy for children. Our findings will be used to inform global best practices in TB identification and treatment.

¹ World Health Organization (WHO). Global tuberculosis report. <http://apps.who.int/iris/bitstream/10665/259366/1/9789241565516-eng.pdf?ua=1>. Published 2018. Accessed September 25, 2018



Intensify Case Finding

To date, EGPAF has tested over 640,000 individuals for TB



Enhance TB Prevention

EGPAF has increased the number of health workers with skills to identify an individual with or at risk of TB to ensure immediate access to prevention and treatment



TB Treatment

EGPAF is implementing more sensitive diagnostics and effective treatments, suitable for children in 10 of the highest TB-burden countries in the world