

For Two Arizona-Based Nonprofits, Past Meets Present on World TB Day

On March 24, the world will recognize the 35th annual observance of World Tuberculosis (TB) Day. The leading cause of death by an infectious disease, TB kills 1.8 million people per year, according to the [World Health Organization](#) (WHO). Even more worrying is the increase in the number of strains of the bacteria *Mycobacterium tuberculosis* that are resistant to the highly potent drugs used to treat TB. For the past 25 years, the WHO has warned of the rise in drug-resistant TB, and reports of multidrug resistance are now found in nearly every country along with the emergence of extremely drug resistant (XDR) TB.

For most of us, the word “tuberculosis” is often forgotten, since the number of cases is minimized due to public health and surveillance efforts afforded to living in the developed world. TB, which was also known as “consumption,” conjures up images of pre-depression hospital wards, featuring endless rows of beds filled with sick and forlorn patients staring out windows toward gray skies. These preconceptions are understandable for those who have lived their whole lives with access to the luxury of modern medicine, making it easy to forget that tuberculosis is still one of the leading causes of death worldwide.

One Arizona organization, however, is championing a worldwide partnership that seeks to address the complex challenges in treating TB and ending the global epidemic. [The Critical Path to TB Drug Regimens](#) (CPTR)—a consortium within the larger Tucson-based nonprofit the [Critical Path Institute](#) (C-Path)—is waging the global fight against tuberculosis through collaboration with TB research organizations, academia, and the pharmaceutical industry. CPTR uses global data aggregation and standardization to understand the genetic basis of drug resistance, and advanced modeling and simulation approaches to develop tools that lead to better drugs and drug regimens to treat TB.

But C-Path is not the first Arizona-based organization to be at the forefront of TB diagnosis and treatment. Just down the road lies the [Tucson Medical Center](#), whose roots extend back nearly a century, to a time when experimental TB treatment was shaping the future of the American Southwest.

At the turn of the 20th century, tuberculosis was killing one out of seven people in North America and Europe. Cramped, heavily populated cities along the Eastern seaboard served as an ideal environment for the deadly and highly infectious bacteria to spread from person to person, with no regard for age, race, or social status. Though it would be years until the first successful antibiotic was developed, physicians of the time had noted the benefits of dry, fresh air and a warm, sunny climate.

By the 1920s, those who were fortunate enough to do so flocked to the “premier destination” for tuberculosis patients. That destination was Southern Arizona. The resort-like sanatoriums of sunny Tucson offered both isolation from the general public, as well as the best care that could be offered to those facing the grim reality of living with a TB diagnosis. The sharp influx in population resulting from the surge of ailing immigrants shaped the city itself, heavily influencing the original layout of the settlement and its building designs. At one point there were more than 30 sanatoriums in use within the city of Tucson alone.

One such destination for TB patients was the internationally known Desert Sanatorium. The historic “Desert San” provided an ideal environment for those suffering from tuberculosis to have the best chance at recovery in an age when the likelihood of survival wasn’t much better than a flip of a coin. Time passed, and by the

early 1940s the world was engulfed in war. The Desert Sanatorium found itself stripped of critical staff and resources, eventually closing its doors in 1943. They wouldn't remain closed for long, however. The Tucson community rallied to raise the necessary funds to convert the local landmark into a brand-new hospital — the Tucson Medical Center.

“In the 1920s a tuberculosis treatment facility was established in Tucson to provide comfort, therapy and healing,” says Mimi Warwick Coomler, Vice President and Chief Nursing Officer of Tucson Medical Center. “This site and these efforts would soon become Tucson Medical Center. Some of the original buildings remain in service today, as a testament to the importance and impact of a community's strength and commitment to eradicating a disease that continues to this day.”

Today, the locally governed nonprofit hospital has been providing first-rate medical care for its community members for over 70 years. Though the Tucson Medical Center now provides a multitude of health care programs, from maternity to hospice services, the landmark hospital has not forgotten its origins as a leading name in tuberculosis therapy so many years ago.

Although TB is far from the disease it once was, a rise in drug resistance is worrying public health officials on a global scale. Reports within the last 10 years have shown some bacteria to be resistant to all anti-TB drugs, which raises the real possibility of untreatable TB disease, bringing back the haunting image of an overcrowded hospital ward. With stronger and more deadly drug-resistant strains killing thousands each day, an entirely modern, global solution is necessary. Thankfully, organizations such as C-Path are continuing the work that was started so long ago by the Tucson Medical Center. Leading the way in global TB diagnostics and drug development, C-Path's CPTR initiative is working with a global coalition of leading international pharmaceutical companies, public health experts, and regulatory authorities to bring the best TB care to those who need it most in the developing world.

Tuberculosis is not a disease of the past, but rather a leading cause of death across the globe. Lessons from the past, highlighted by the impactful history of Tucson Medical Center, should be a reminder of the consequences of inaction. Though there is still much to be done to prevent the loss of life resulting from the devastating disease, by looking to the past successes achieved by institutions such as the Tucson Medical Center, initiatives such as C-Path's CPTR can hopefully, one day, celebrate a global victory over tuberculosis on the 24th of March.

C-Path Contact:

Kissy Black

615.298.1144

kissyblack@lotosnile.com