

# Persimmony.

## Combating the Spread of Tuberculosis

Tuberculosis kills five thousand people every day. The tuberculosis (TB) bacterium, whose fatal influence has been documented back to Ancient Egypt, remains one of the top 10 causes of death worldwide and ranks as the world's top infectious killer.

This white paper provides detail regarding the recent proliferation of TB in global communities and shares how Persimmony's Case Management tool can help hedge against and combat the spread of TB.



### History

The incidence of tuberculosis grew progressively, peaking between the 18th and 19th century as agricultural workers migrated to the cities seeking work during the Industrial Revolution. Workers lived in poverty and squalor, which created an optimal environment for TB to spread.

The poor had high rates of tuberculosis in large cities. It was dubbed consumption. Public-health physicians and politicians tended to blame the poor themselves, the crowded tenements housing them, and the associated poor sanitation for the spread of the disease. The affluent were exposed by their domestic help.

Cities and governmental agencies started to focus on combatting TB in the 19<sup>th</sup> century. City dwellers ignored public-health campaigns aimed at limiting the spread of contagious diseases, which included the prohibition of spitting on the streets, strict guidelines for infant and young child care, and quarantine for the ill. Families did not want to be separated so most TB cases went unreported.

Conjecture on the root cause of the disease was rampant until the late 1800's. In 1882, Dr. Robert Koch applied a staining method to the sputum of tuberculosis patients, revealing the source of the disease: *Mycobacterium tuberculosis*, or Koch's bacillus.

*"If the importance of a disease for mankind is measured from the number of fatalities which are due to it, then tuberculosis must be considered much more important than those most feared infectious diseases, plague, cholera, and the like. Statistics have shown that 1/7 of all humans die of tuberculosis."*

— Die Ätiologie der Tuberculose, Robert Koch (1882)

Although the causal agent had been identified, no cure was at hand. TB patients continued to suffer and contaminate others.

### Victims

TB strikes every social level, ethnicity and age group. Here are just a few of the internationally recognized figures lost to TB:

- **Frederic Chopin**, *Polish composer*
- **George Orwell, Jane Austin and Emily Bronte**, *English novelists*
- **Louis Braille**, *blind French inventor and educator*
- **Simon Bolivar**, *Venezuelan military and political leader*
- **Edward VI and Henry VII**, *Kings of England*
- **Xian Xinghai**, *Chinese composer*
- **Muhammad Ali Jinnah**, *founder of Pakistan*

Some famous Americans who perished from TB include:

- **James Monroe and Andrew Jackson**, *United States Presidents*
- **Caroline Harrison and Eleanor Roosevelt**, *former first ladies*
- **Henry David Thoreau**, *writer*

## Positive Change

It was not until 1944, that a curative was identified. Streptomycin was the first antibiotic to show efficacy against TB. The introduction of isoniazid in the 50's launched a drug campaign against TB that lasted into the 80's. The 1980's saw TB make a comeback for a variety of reasons, the most problematic of which was drug resistant strains had emerged.

In response to this resurgence, the World Health Organization (WHO) declared a global health emergency in 1993. Every year since, nearly half a million new cases of multidrug-resistant tuberculosis (MDR-TB) are estimated to occur worldwide.

## Mission

The WHO has committed to ending the TB epidemic by 2030. Persimmony is dedicated to that aim.

*"While the world has committed to ending the TB epidemic by 2030, actions and investments don't match the political rhetoric. We need a dynamic, global, multisectoral approach.... These will build momentum, get different sectors engaged, and accelerate our efforts to make TB history."*

— Dr Tedros Ghebreyesus,  
WHO Director-General, 2017

Persimmony recognizes and commends the dedication of the public health system to combat this communicable disease.

In the USA, public-health agencies have identified a 3-pronged approach to defeating TB in their local communities:

- Identification
- Treatment
- Containment

The last of which is most daunting. It is a complex, time consuming, and expensive proposition.

The Persimmony communicable disease (CD) software application with embedded Targeted Case Management (TCM) is designed to accommodate all 3 fronts and meets the public need that was defined nearly 75 years ago:

*"No health department, state or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring."*

— Public Health Reports, 1946

## How Persimmony Combats the Spread of TB



### Identification - diagnosis of affected person(s)

Persimmony addresses latent and active case charting. Persimmony accommodates the entire identification process and provides a means to document the methodologies used and their results for each individual case.

The most common protocols include skin tests, X-rays and CT scans, sputum tests, and blood tests. The results of a TB skin test help determine the next steps in a person's treatment.



### Treatment - curative medical intervention

Persimmony generates monthly medication reports and dosage information, draws investigation and evaluation reports from assessments, and generates ARPE aggregate reports from TB program evaluations.

Case Managers can easily print all or part of client records or send them electronically to share data with interested parties.

Persimmony makes the Practitioner's job easier with a data entry process that does not exceed 5 screens using any web enabled device, generates color-coded summaries, compiles RVCT data and much more.



### Containment – reduce exposure to the healthy population

Persimmony software accommodates and manages the documentation an unlimited number of contacts to support tracking the exposure risk associated with an affected person. Centralizing the names, locations, and relationships within the affected person's sphere of influence benefits health and service agency personnel. It enables them to protect the community from further contamination.

## USA Specifics

Persimmony complies with HIPAA and other regulatory requirements. SOC2 certification ensures security.

TB records interact seamlessly with the federal TCM reimbursement process or other funding sources. The embedded TCM feature enables CD Departments to access federal reimbursement funds for eligible services provided during the identification and treatment phases. These funds may be applied to the containment effort, in addition to reducing the burden on general funds.

Incomplete treatment cycles rank high in the emergence of the drug resistant strains being faced globally. TCM reimbursements could be invested in projects such as funding dedicated care facilities where the ill could be isolated, public exposure minimized and treatment plans followed through completion.



## Dedicated to serving those who serve the public good

Persimmony contributes to the public good by equipping outreach personnel with the tools needed to provide quality services.

Persimmony:

- Meets or exceeds your program needs
- Provides an extensive library of assessments & reports
- Can be quickly customized for your agency's requirements
- Offers rapid implementation and training

Picture what you will achieve with Persimmony in your toolbox.

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