



Welcome to the 6th Annual Tuberculosis Education Conference



March 21, 2019

Breathe Pennsylvania

- Our mission is to empower western Pennsylvanians to breathe better and live healthier through education and awareness of lung health in our community
- Serves 10 counties in southwestern PA
- Programs include:
 - Direct Lung Education
 - Patient Assistance
 - School Asthma Initiative
 - Sleep Apnea Education
 - Tobacco Cessation
 - Tuberculosis Education



Event Sponsors

Silver Level



UPMC Center for Engagement and Inclusion

Bronze Level



Agenda

- 8:00 a.m. Registration
- 8:30 a.m. Welcome and Introduction of Guests
- 9:00 a.m. International TB Management Practices and their Impact on the U.S.
Eric Bihler, DO, AHN Pulmonary and Critical Care Medicine
- 10:30 a.m. Break
- 10:45 a.m. Tuberculosis Management: A TB Patient's Point of View
Krystal Martin, Patient Advocate, We Are TB
- 11:15 Pennsylvania TB Risk Assessment Tools
Jamie Durocher, MPH, Public Health Program Assistant Administrator, PA
Department of Health
- 12:00 p.m. Closing Remarks/Evaluations/Adjournment
Bruce Bush, MD Board Member, Breathe Pennsylvania



Continuing Education Credits

- 2.5 credits for nurses offered through Nurses Credentialing Center's Commission on Accreditation in partnership with University of Pittsburgh's School of Nursing
- 2.5 credits for respiratory therapists offered through American Association of Respiratory Care
- No partial credit is available



Continuing Education Credits

- **Claiming credit**

- Sign in at registration desk
- Turn in completed evaluation form at the end of the conference
- Certificates will be available at the end of the conference



Disclosures

- There is no potential conflict of interest or financial interest by the faculty and/ or planners of this activity to be disclosed
- There is no endorsement by Breathe Pennsylvania or the University of Pittsburgh or ANCC of any commercial products discussed / displayed in conjunction with this educational activity
- The entire session and the participant feedback tool must be completed to earn contact hours





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The Wasting Disease



Phthisis

Consumption

White Plague

Tuberculosis



SYMPTOMS OF TUBERCULOSIS

BE EXAMINED IF YOU HAVE ONE OR MORE OF THESE



Loss of weight or Tiring easily suggests tuberculosis



A cough lasting longer than three weeks is very suspicious



A continued temperature of 98° or less in the morning and an afternoon temperature of 99.5° or more are strong indications of tuberculosis.

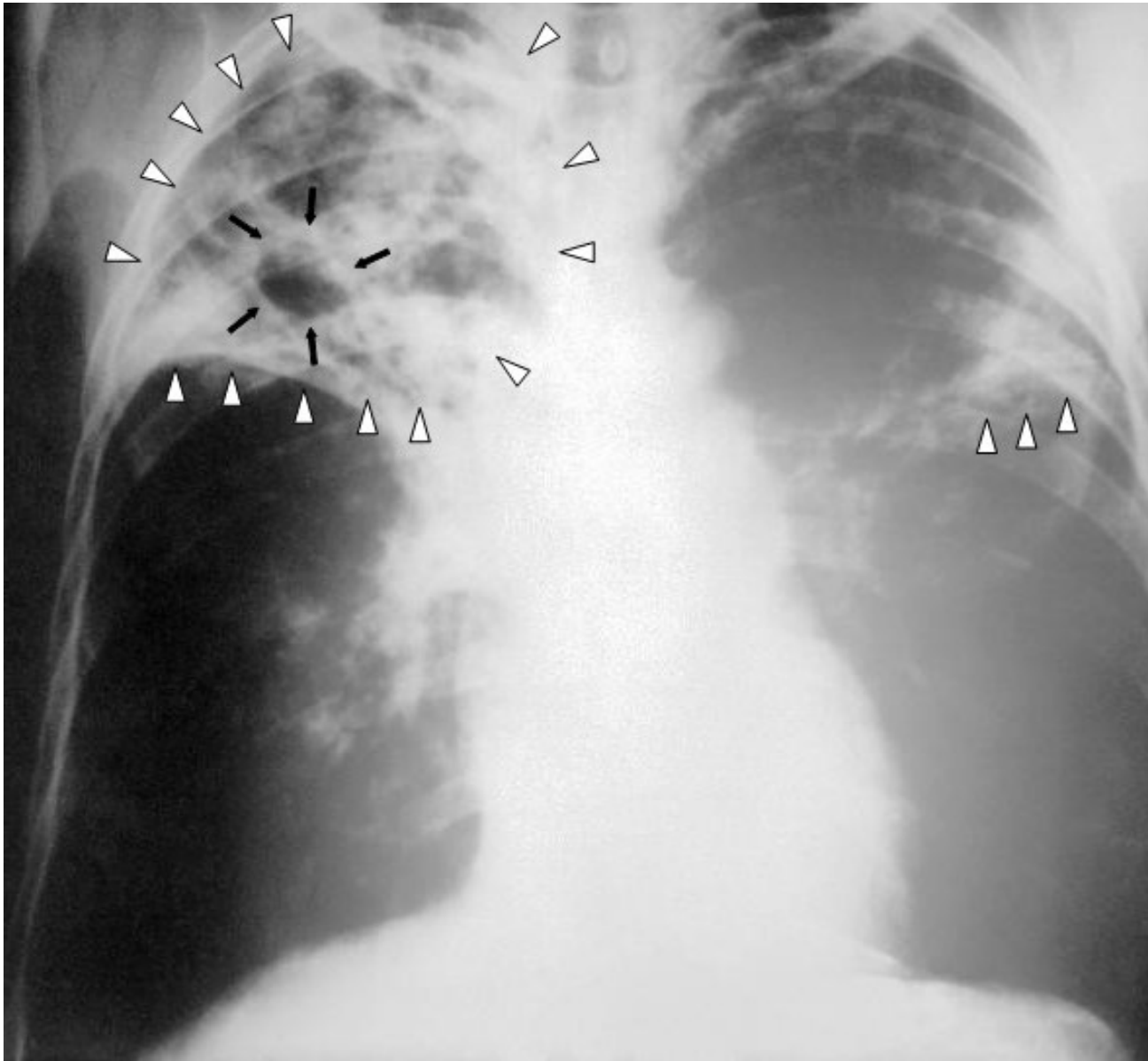


A low blood pressure may mean tuberculosis.



If you have any one or more of these symptoms be examined by a careful physician at once.





TB Has Affected Humans for Millennia



History of Tuberculosis

- Modern strains of *M. tuberculosis* appear to have originated from a common ancestor about 15,000–20,000 years ago
- Tuberculosis in Egypt can be documented more than 5000 years ago
- Written texts describe tuberculosis in India as early as 3300 years ago and in China 2300 years ago



History of Tuberculosis

- Hippocrates: “Phthisis makes its attacks chiefly between the age of eighteen and thirty-five.”
- Aristotle: “When one comes near consumptives...one does contract their disease...The reason is that the breath is bad and heavy...in this air there is something disease producing.”



History of Tuberculosis

- By the dawn of the 19th century, TB had killed one in seven of all people that had ever lived.
- In the first decades of the 20th century, one out of every 170 Americans lived in a sanatorium, a life of exile.
- Before antibiotics, half of all people with TB could expect to die within 5 years.



History of Tuberculosis

- In the 1980's TB in the U.S. spiked as a result of the AIDS epidemic.
- Since then, drug-resistant TB has become more common.
- Today, there are nearly 10,000 TB cases in the U.S. and nearly 10 million worldwide.

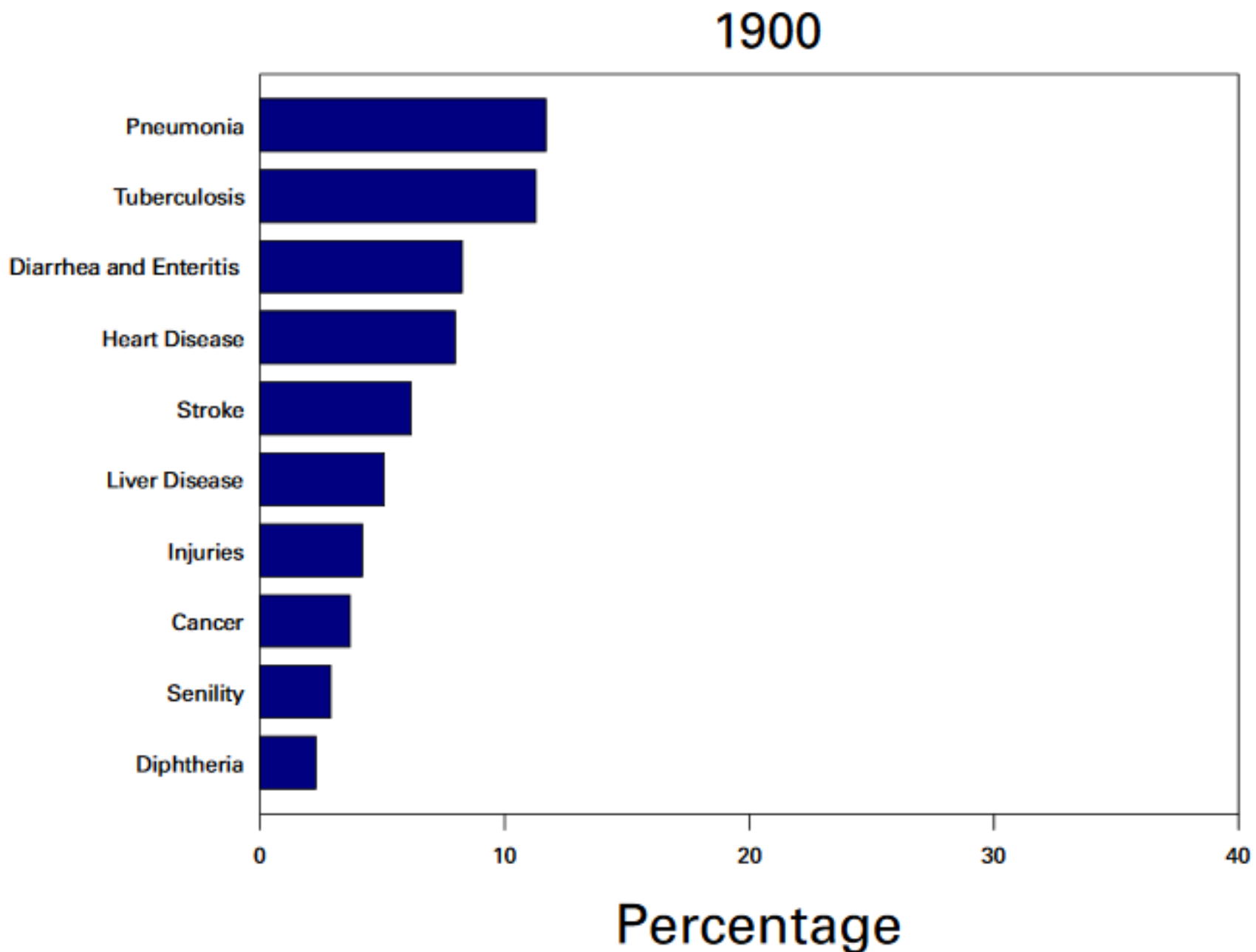


Captain of all these men of Death

- It was estimated that, at the turn of the century, 450 Americans died of tuberculosis every day, most between ages 15 and 44. The disease was so common and so terrible that it was often equated with death itself.



FIGURE 2. The 10 leading causes of death as a percentage of all deaths — United States, 1900



KENTUCKY



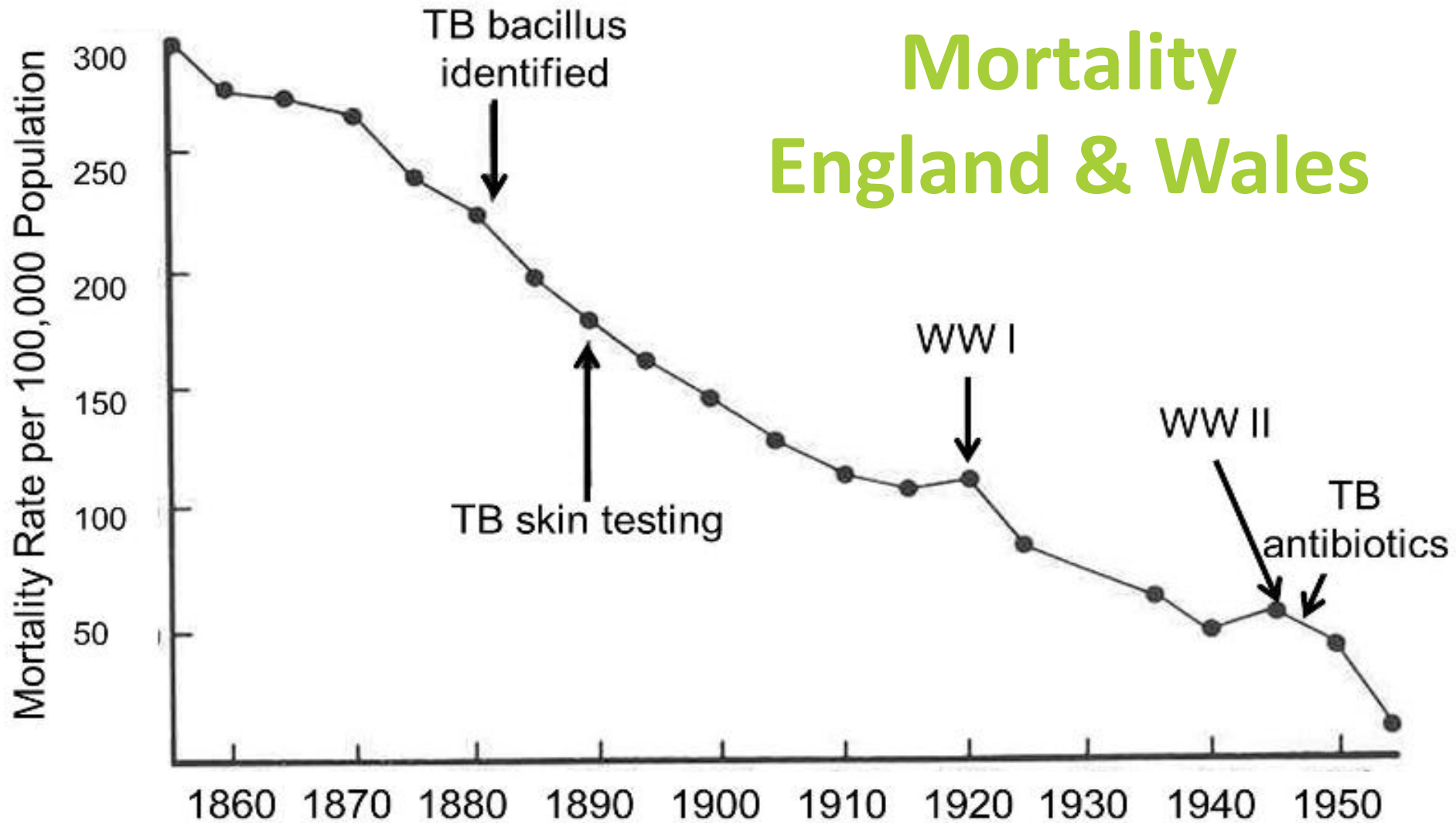
6.802
KILLED IN BATTLE
DIED OF WOUNDS
OR DISEASE

7.997
KILLED
BY
TUBERCULOSIS

**2nd. WORLD'S
WAR
56 MONTHS**

**DURING WAR
PERIOD
56 MONTHS**

Mortality England & Wales



Why Has Mortality Decreased?

- Public Health measures?
- Better living conditions?
- Improved nutrition?
- Sanatorium care?
- Improving natural immunity?



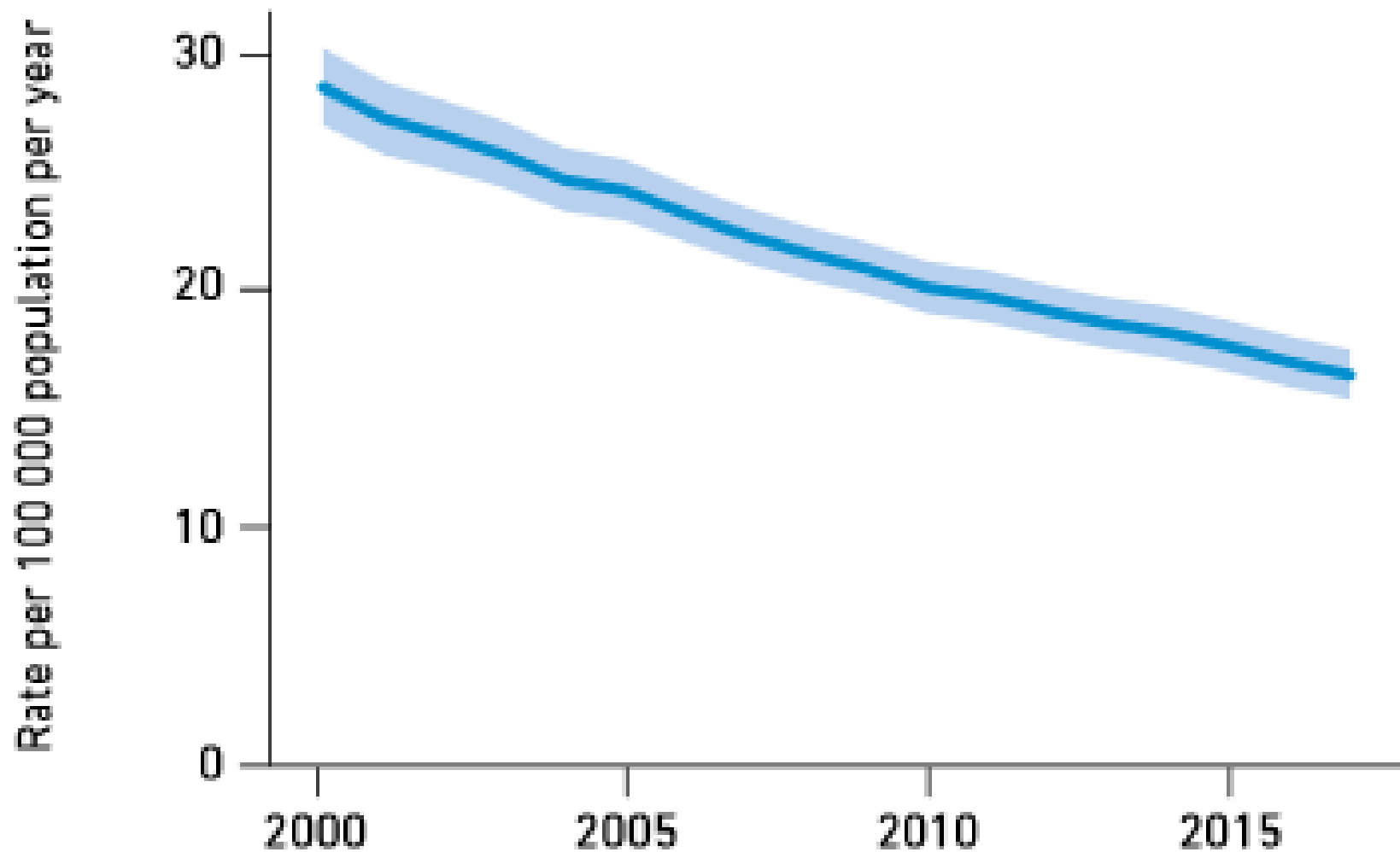


Progress in TB Control

- Between 2000 and 2017, an estimated 54 million lives were saved through TB diagnosis and treatment.
- TB deaths fell by 33% in the same period.
- Yet, TB remains the top infectious killer in the world.



TB mortality (HIV-negative)



Miles to Go

- About **one-quarter of the world's population** has latent TB, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease.



TB remains one of the top 10 causes of death worldwide

- In 2017, 10 million people fell ill with TB, and 1.6 million died from the disease (including 0.3 million among people with HIV).
- In 2017, an estimated 1 million children became ill with TB and 230,000 children died of TB (including children with HIV associated TB).



Too many people in our country still suffer from tuberculosis (TB)

- 9,105 TB cases reported in the U.S. in 2017
- 528 TB Deaths in 2016
- 7 out of every 10 TB cases occur among non-U.S.–born persons.



DRUG-RESISTANT TB IS COMPLEX & COSTLY

TOTAL 2017 CASES

2

Extensively Drug-Resistant TB

121

Multidrug-Resistant TB

8,982

Tuberculosis (Nonmultidrug-Resistant)

DIRECT TREATMENT COST PER CASE

\$526,000

\$164,000

\$19,000



Total cost to U.S.
for TB cases in 2017.

Challenges of Today

- Immune compromise due to HIV and advanced immunotherapy
- Drug resistance – MDR, XDR, & TDR-TB
- Insufficient funds applied to worldwide management
- Search for an effective vaccine





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