A case study

Patient reported to health department
Assigned a BTBC case manager
Chart review
Interview patient and educate about TB
Identify contacts and TB exposure sites
Interview and test contacts within and outside the household
Follow-up for cases and contacts through treatment completion

NEW YORK CITY’S TB CONTROL EFFORTS

TUBERCULOSIS ELIMINATION in NEW YORK CITY
Joseph N. Burzynski, MD, MPH
Director, Bureau of Tuberculosis Control
New York City Department of Health and Mental Hygiene

Case management timeline
**Key Activities – Case Management**

- **Case manager** assigned to every active TB patient
  - Case manager interviews and educates patients, and monitors treatment
  - Weekly review with case management team (which includes physicians)
  - Enhanced case management of drug-resistant cases
- **Directly observed therapy (DOT)** offered to all patients
  - Field-based, clinic-based, and video options
- **Address non-adherent infectious patients through legal interventions**
  - Mandated evaluation, monitoring, and detention
  - Due process safeguards

**Key Activities - Surveillance**

- **Mandate reporting**
  - Laboratory and provider reporting of suspected and confirmed TB cases
  - Maintain registry of suspected and confirmed TB cases and their contacts
  - Report to appropriate local, state, and federal entities
- **Conduct ongoing surveillance**
  - Monitor trends
  - Manage TB cases and contacts who move in and out of NYC
  - Data-driven decision making

**Key Activities – Patient Care**

- Operate four **TB clinics**
- Set **standards and guidelines** for screening and treatment
  - Publish clinical policies and procedure manual
- Expert **medical consultation** for all patients treated by community providers

**Key Activities – Prevent transmission**

- Conduct prompt **contact investigation**
  - Interview patients to identify close contacts and settings where TB exposure may have occurred
  - Investigate exposures in congregate settings (i.e. worksite, schools, etc.)
  - Test and treat contacts diagnosed with TB infection
- **Detect and control outbreaks**
  - Genotyping done on all culture-positive TB isolates
  - Cluster and outbreak investigations conducted by epidemiologists
  - Outbreak response activities
Key Activities – Educate

- Conduct outreach to providers and communities
  - Culturally and linguistically sensitive
  - 70+ hospitals and 1,000s of private providers
  - Collaborate with community leaders and organizations
- Conduct research and share findings
  - Conduct observational studies, participate in clinical trials and institute pilot programs
  - Publish and present studies
  - Host World TB Day Medical Conference, NYC TB Research Consortium, Citywide TB rounds, and other events

**Profile of TB Cases in New York City: 2016**

**Tuberculosis Cases and Rates, 1 New York City, 1982-2016**

**Tuberculosis Rates1 by Age Group, New York City, 2007-2016**
Clinical Highlights

- 51% of patients have a respiratory smear positive for acid-fast bacilli

- 80% of patients have a positive culture for *Mycobacterium tuberculosis*

- Comorbidities identified during case management
  - 18% diabetic
  - 5% HIV infected
  - 5% with non-HIV related immunosuppression
  - 2% on TNF-α antagonist therapy
The U-Shaped Curve of Concern

TB incidence in NYC

- Continued divestment in TB control
- Loss of expertise in TB control activities
- No new diagnostics or medications
CDC’s Dual Approach to TB Elimination

1. Strengthening systems to control and prevent TB transmission

2. Increase efforts to treat and detect LTBI before it becomes active TB disease

Strengthening TB Control Activities

- TB control activities that were strengthened after the TB resurgence in the 1990s and led to the sharp decline in TB rates
  - Political support: influx of sustained federal state and local resources
  - Comprehensive case management with DOT became the standard of care
  - Integrated social services in TB care, including housing; provided incentive programs; provided screening at homeless shelters and drug treatment centers; coordinated with HIV programs
  - Mandatory drug susceptibility testing; genotyping to identify lab cross contamination and outbreaks of TB
  - Improved infection control in congregate settings

But...we need to do more to bend that curve

- Expand our community outreach efforts
  - Continue to encourage providers to “Think TB”
    - Majority of new cases in people born outside the US occurred at least 6 years after entry to the US (CDC)
    - Reduce delays in diagnosis
      - Engage communities at high risk

- Maintain our program priorities despite budget challenges

- Increase efforts to treat and detect LTBI before it becomes active TB disease

US Preventive Services Task Force now recommends LTBI screening as part of routine preventive care for certain at-risk populations

This recommendation applies to asymptomatic adults ≥18 years of age who are at increased risk for TB and are seen in primary care settings.

- Born in, or former residents of, countries with increased tuberculosis prevalence (e.g., China, Haiti, India, Mexico, Philippines)
- Currently live in, or have lived in, high-risk congregate settings (e.g., homeless shelters, long-term care facilities, correctional facilities)
Testing for LTBI

- **Who else to test? People who...**
  - Are contacts to active TB patients
  - Travelled (>1 month) to countries with high rates of TB
  - Have immunosuppression due to diseases (e.g. cancers) or medications (e.g. TNF-α antagonists)

- **TB tests**
  - Blood based tests (QuantiFERON or T-SPOT)
    - Recommended for foreign born persons who are likely BCG-vaccinated
  - Tuberculin skin test (TST)

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A decision to test is a commitment to treat...and now we have shorter treatment!

- **Shorter course treatments**
  - Rifampin
  - 3HP

- **Video Directly Observed Therapy**
  - Live and Recorded

*Completing LTBI treatment can reduce the chance of developing TB disease by 90%*

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TB incidence in NYC – getting to zero!

1. Strengthening systems to control and prevent TB transmission
2. Increase efforts to treat and detect LTBI before it becomes active TB disease

*WORKING TOGETHER TO STOP TB*
Any New York City resident with active TB or a positive test for TB infection can be referred for these services free of charge to the patient:

- **Chest Center Services**, including
  - Evaluation & Treatment for TB
  - Treatment for LTBI
- **Case Management Services**, including:
  - Directly Observed Therapy (video/in-person)
  - Shorter regimens for LTBI (3HP & 4R)

*Contacts may also be referred for QFT testing and Medical Evaluation*

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**Partnering to End TB**

- Contact us for medical lectures (i.e., Grand Rounds, Noon Conferences)

- Sign up for TB Action News, our e-newsletter
  - Local, national and international advances in TB
  - Educational events for providers and communities
  - Changes to services and guidelines

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**Resources for Providers**

- **nyc.gov/health**
  - Report confirmed or suspected TB via NYCMED
  - Sign up for Health Alert Network emails

- **844-713-0560** (TB Hotline)
  - Contact Doctor on Call for medical consultation or to review discharge plans
  - Connect patients with DOT and other services

- **nyc.gov/health/tb**
  - Access educational resources
  - Sign up for TB Action News emails

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**TB EDUCATIONAL RESOURCES FOR HEALTH CARE PROVIDERS AND THE PUBLIC**

**CLINICAL PRACTICES AND PROTOCOLS**

- MT Guidance:
  - Contraindications, protocols and recommendations for the prevention, treatment and control of TB

**PATIENT INFO/GUIDANCE**

- Learn More: Telemedicine, Prevent TB Exposure, General Information & More...
  - TB暨TB-related emergencies are best managed by a trained healthcare professional.
  - Please contact your doctor or call the TB Hotline (844-713-0560) for more information.

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**EDUCATIONAL MATERIALS**

- Free educational materials available in English, Spanish, French, Italian, Polish, Russian, Tagalog, and Chinese.
  - To request information in print or online, please email TBinfo@health.ny.gov.

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**TB EDUCATION RESOURCES FOR HEALTH CARE PROVIDERS**


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**TB EDUCATION RESOURCES FOR THE PUBLIC**

- To learn more about TB and TB-related topics, visit the New York City Department of Health and Mental Hygiene (DOHMH) website at http://www1.nyc.gov/html/doh/tb.
A rigorous, multi-faceted, and coordinated approach to TB control reduces TB rates today and sets the stage for a TB-free future.

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