



**National Jewish Health**®

Science Transforming Life®

# Advanced Diagnostic Laboratories

## Successful strategies for reporting TB results to public health officials

**Max Salfinger, MD**  
**Mycobacteriology and Pharmacokinetics**  
**Denver, Colorado**



**Which TB result needs to be reported?**

**Or**

**The ever changing landscape of reporting TB!**

# TB reporting in US

1897

New York City Board of Health passed an ordinance to require that physicians report all cases of TB to the City

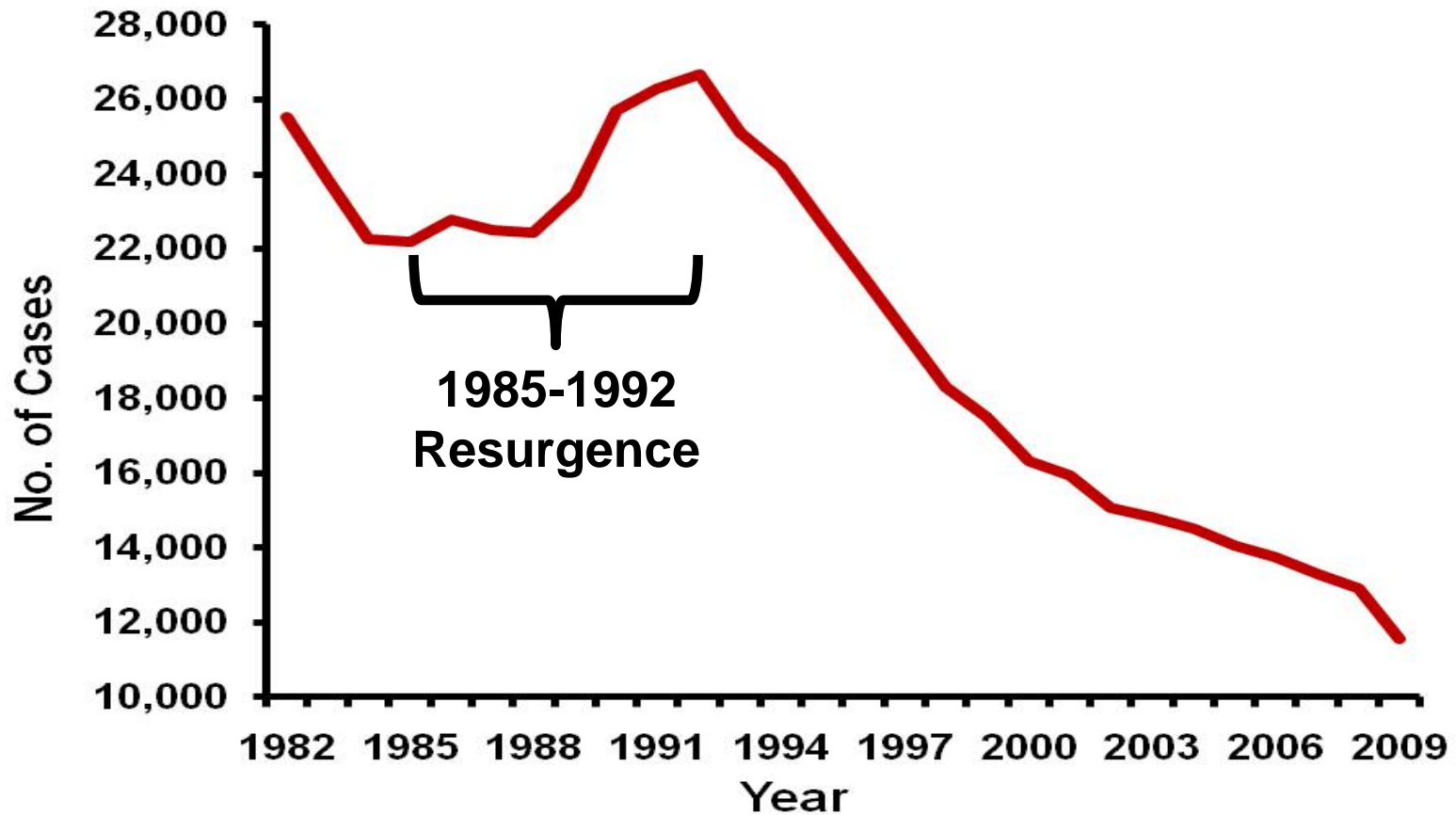
1892

First Municipal Public Health Laboratory in New York City  
Its first director: **Hermann Biggs, MD [1859 – 1923]**

*“That a physician could leave a throat culture at a drug store in his neighborhood at 5 PM and be sure of receiving a report by telephone before 10 AM the next morning.”*



# Reported TB Cases, United States 1982-2009



\*Updated as of July 1, 2010.



# Algorithm

**AFB pos.**  
smear

**AFB pos.**  
NAAT

**AFB pos.**  
culture

**TB Control**  
is eager to get  
results

**TB**  
complex

**NTM**

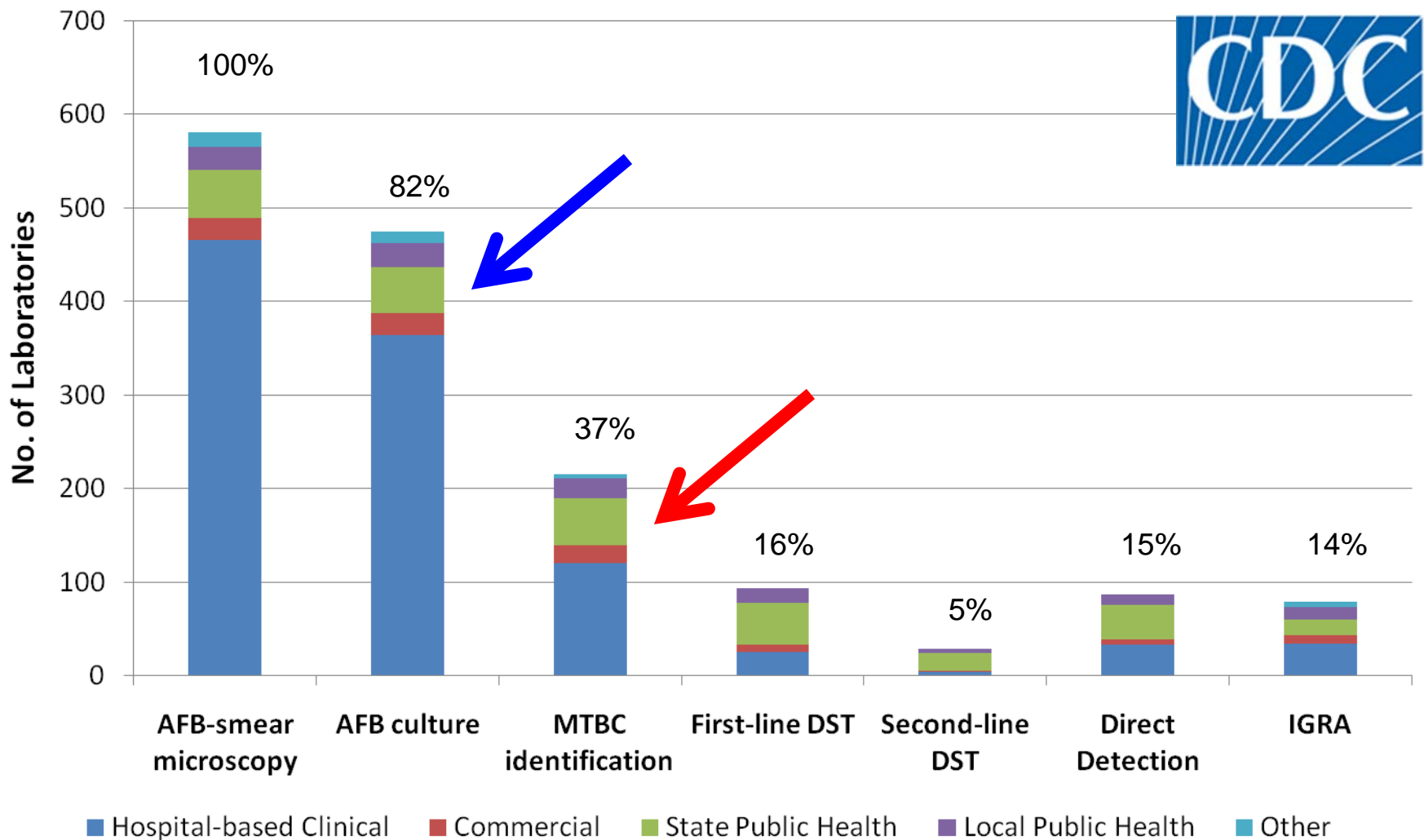
**MDR/XDR Screen,**  
**Direct AST**

**Significance, Identification, MIC,**  
**Combination MIC**

**Speciation, Indirect AST, MIC**


**Therapeutic Drug Monitoring**

# APHL/CDC Survey 2011



# US - CO - CA - FL - MD - PA - NY - RI





# US – CO – CA – FL – MD – PA – NY – RI

2014 Event Code List

Nationally Notifiable Diseases and Other Conditions of Public Health Importance

Division of Health Informatics and Surveillance


Center for Surveillance, Epidemiology, and Laboratory Services

November 18, 2013

**99 diseases/codes have been designated by CSTE as nationally notifiable and should be reported to CDC on a regular basis**

**TUBERCULOSIS - 10220**





# US – CO – CA – FL – MD – PA – NY – RI

2013 Colorado Board of Health

CONDITIONS REPORTABLE BY ALL LABORATORIES

## 24-hour Reportables

Any result diagnostic of or highly correlated with clinical illness for the following organisms: ***Mycobacterium tuberculosis* (Tuberculosis) (Including + AFB sputum smears)**

**Voluntarily also reported: ID of AFB + smear and ID of AFB positive culture (TB ruled out)**

**In addition reportable** when patient resides in one of the Denver Metropolitan Area Counties (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas & Jefferson)

Reports should include (and to be faxed):

- 1 Name of Disease or Conditions**
- 2 Patient's Name**
- 3 Patient's DOB, sex, race, ethnicity**
- 4 Patient's home address and phone**
- 5 Physician's name, address, and phone**
- 6 Lab info – test name, collection date and specimen type**

Title 17, California Code of Regulations (CRC), Section 2505  
REPORTABLE CONDITIONS: NOTIFICATIONS BY LABORATORIES

January 2014

**Within one working day**

**Acid-fast bacillus (AFB)**

***Mycobacterium tuberculosis***

**Tuberculosis**

**Reportable to the local health officer of the health jurisdiction where the health care provider who first submitted the specimen is located**

- If the laboratory that makes the positive received the specimen from another laboratory, the laboratory making the positive finding shall notify the local health officer...
- **If the laboratory is an out-of-state laboratory, the California laboratory that receives a report of such findings shall notify the local health officer....**

Laboratories shall transmit these reports to local health officer **by courier, mail, electronic facsimile or electronic mail**. Within one year of the establishment of the state electronic reporting system, all List (e)(2) diseases shall be reported **electronically** to the state electronic reporting system



# US – CO – CA – FL – MD – PA – NY – RI

TB Lab Reporting Requirements / Florida Department of Health [accessed June 2, 2014]


**Within 72 hours**

***Mycobacterium tuberculosis complex***

**Reportable to the County Health Department in the county in which the patient lives, or the laboratory is located**

Each person who is in charge of a laboratory which performs cultures for mycobacteria isolated from humans or which refers specimens for mycobacterial cultures isolated from humans to laboratories (other than those operated by the Florida Department of Health) shall report or cause to be reported all specimens positive for *Mycobacterium tuberculosis complex*, by **telephone or writing** within 72 hours from the date of the test result.

PS: A document based on Chapter 64D-3 revisions, November 24, 2008 listed: positive AFB smear, culture, NAAT, or histologic evidence



# US – CO – CA – FL – MD – PA – NY – RI

Code of Maryland Regulations (COMAR) 10.06.01.03 C details the diseases, conditions, outbreaks, and unusual manifestations that are reportable in MD, October 1, 2008 and Instructions for MD Communicable Disease Morbidity Reporting (DHMH 1281) REVISED: April 4, 2014

## Immediate

### *Mycobacterium tuberculosis* complex

Health care provider report: (a) A laboratory confirmed acid-fast bacillus on smear; (c) A laboratory confirmed biopsy report consistent with active tuberculosis;

## Within one working day

*Mycobacterium spp., other than Mycobacterium tuberculosis complex* or

*Mycobacterium leprae*

Note: If a medical laboratory forwards clinical materials out of state for testing, the originating medical laboratory must comply with all requirements for reporting and specimen submission

For medical laboratories located in Maryland, reports should be submitted to the local health department in the jurisdiction where the lab is located. For medical laboratories located outside of Maryland, reports should be submitted to the state health dept. 12



Pennsylvania CHAPTER 27. COMMUNICABLE AND NONCOMMUNICABLE DISEASES,  
accessed June 2, 2014

**No later than next work day**

**Tuberculosis, confirmation of positive smears or cultures, including results of drug susceptibility testing.**

(a) A person who is in charge of a **clinical laboratory** in which a laboratory test of a specimen derived from a human body yields microscopical, cultural, immunological, serological, chemical, virologic, nucleic acid (DNA or RNA) or other evidence significant from a public health standpoint of the presence of a disease, infection or condition listed in subsection (b) shall promptly report the findings, **no later than the next work day** after the close of business on the day on which the test was completed.

Laboratory test results shall be reported by the person in charge of a laboratory directly to the **Department's Bureau of Epidemiology** through **secure electronic mechanisms** in a manner specified by the Department,



# US – CO – CA – FL – MD – PA – NY – RI


New York State and New York City Laboratory Reporting of 2010 Communicable Diseases

**Suspected or confirmed organisms/diseases must be immediately reported by phone to local or city health department in which the patient resides**

***Mycobacterium tuberculosis*, *M. bovis*, *M. bovis* BCG, and other members of the *M. tuberculosis* complex.**

(Positive AFB smear (including subsequent culture result), NAAT, culture for *M. tuberculosis*, *M. bovis* and other members of the *M. tuberculosis* complex from any site, susceptibility test results, or histologic evidence of disease. **Negative culture and NAAT results on follow up specimens must also be reported.**

**Report via Electronic Clinical Laboratory Reporting System (ECLRS) since 2008 (NYS) and 2006 (NYC) within 24 hours in addition to the phone call to the local health department**



# US – CO – CA – FL – MD – PA – NY – RI

RHODE ISLAND REPORTABLE DISEASES SUMMARY SHEET FOR CLINICAL PROVIDERS,  
August 2012; RULES AND REGULATIONS PERTAINING TO THE REPORTING OF  
COMMUNICABLE, ENVIRONMENTAL AND OCCUPATIONAL DISEASES (R23-10-DIS);  
Accessed June 2, 2014

**Tuberculous disease caused by *Mycobacterium tuberculosis*--all sites**

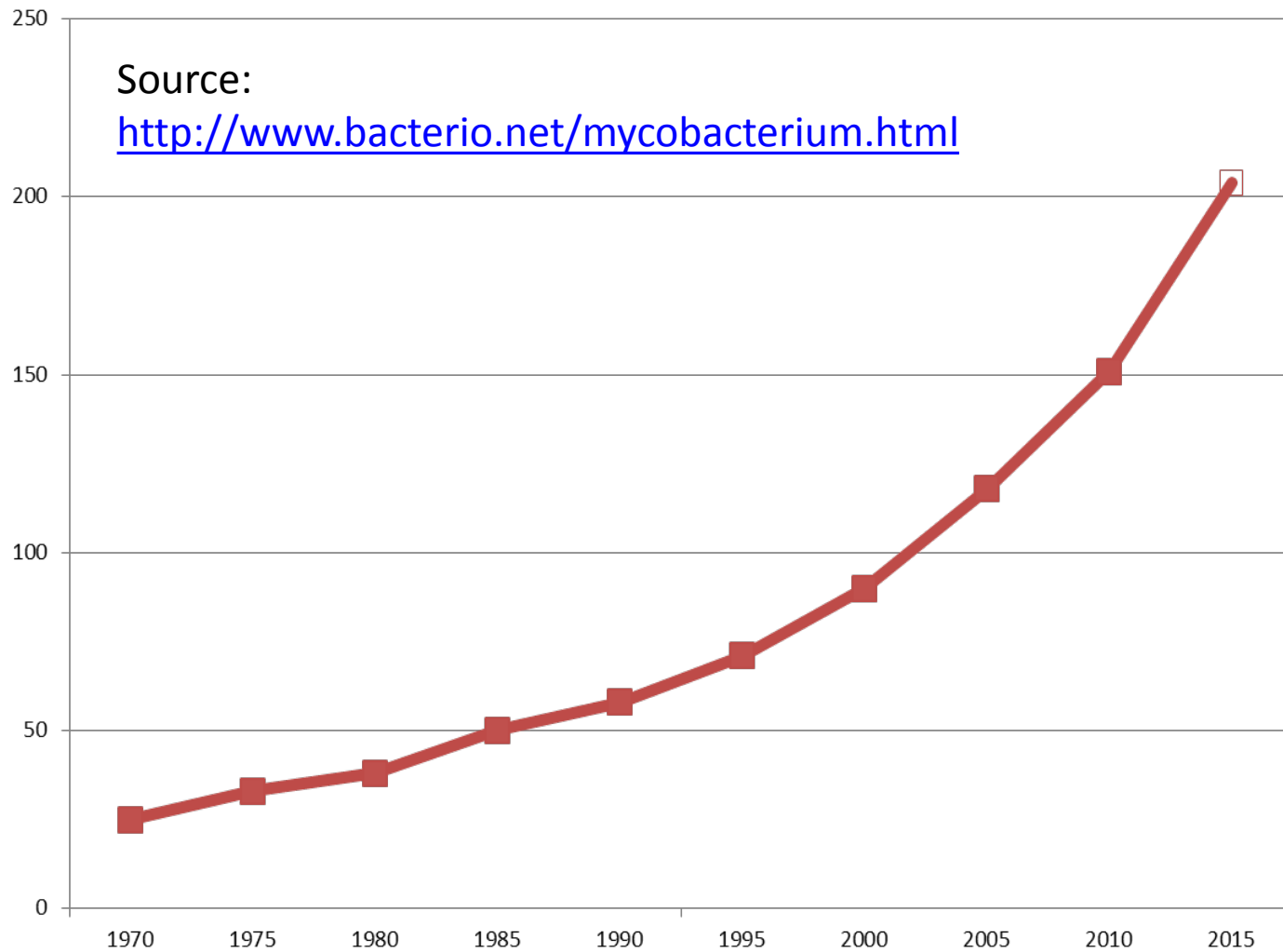
**PPD positives (Latent Tuberculosis Infection or LTBI) in all age groups must be reported.**

**CONFIDENTIAL REPORT FOR ACTIVE AND SUSPECT TUBERCULOSIS CASES**

**Mail or fax fully completed report on confirmed and suspected cases of TB within 4 days  
of recognition**

**A clinical laboratory performing AFB smears and/or cultures and sensitivities, or having  
the samples tested out of state, shall report positive results to the Center for  
Epidemiology and Infectious Disease, Department of Health.** Positive culture results must  
be accompanied by all prior AFB smear results associated with the current episode of  
illness on the individual whether positive and negative.

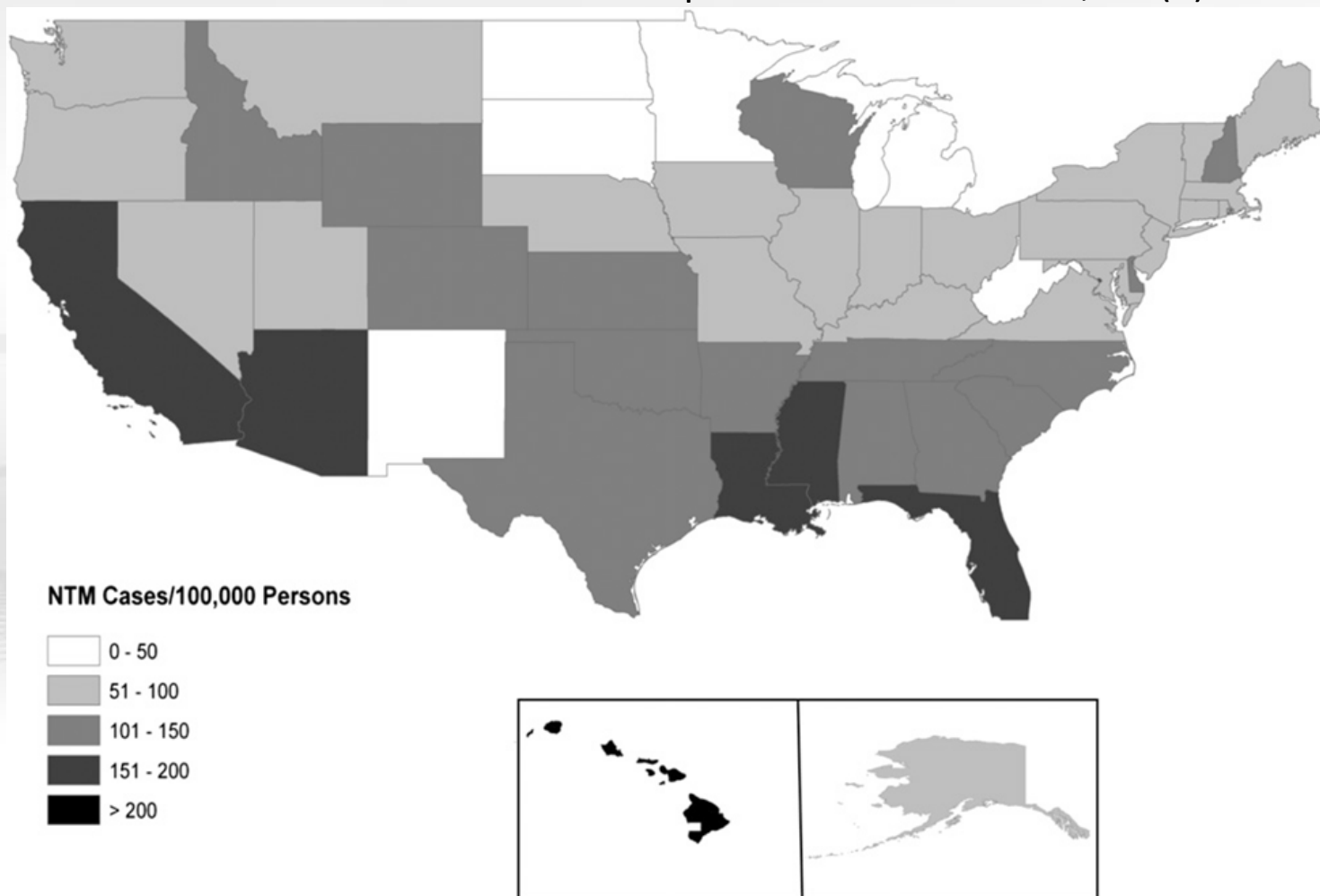
# Newly described Species and Subspecies - **Mycobacterium**





# Prevalence of Nontuberculous Mycobacterial Lung Disease in U.S. Medicare Beneficiaries

Adjemian J, Olivier KN, Seitz AE, et al. Prevalence of nontuberculous mycobacterial lung disease in U.S. Medicare beneficiaries. *Am J Respir Crit Care Med* 2012;185(8):881-886.





# Oregon

## 333-018-0013 Electronic Laboratory Reporting

(1) A licensed laboratory that, pursuant to ORS 433.004 and OAR chapter 333, division 18, sends an average of greater than 30 records per month to the local public health administrator shall electronically send all reportable disease data to the Authority – since 2009.

## 333-018-0015 What Is to Be Reported and When

(3) Licensed laboratories shall report all test results indicative of and specific for the diseases, infections, microorganisms, and conditions specified below for humans. Such tests include but are not limited to: **microbiological culture, isolation, or identification; assays for specific antibodies; and identification of specific antigens, toxins, or nucleic acid sequences.**

(c) Within **one local public health authority working day**: *Mycobacterium tuberculosis* and *M. bovis* (tuberculosis); **nonrespiratory infection with nontuberculous mycobacteria**



# Seven observations

- ✓ A **variety of laboratory test results** regarding tuberculosis
- ✓ Reference laboratory may have **no information about patient's home address and phone number**
- ✓ Some states require **electronic reporting**, while others are still **paper based**
- ✓ **Varying time requirements** for reporting
- ✓ Some states require **latent tuberculosis** to be reported as well
- ✓ Some states require **nontuberculous mycobacteria** to be reported as well
- ✓ **A practical, partial solution to this maze is that some states require the submitting laboratory to report to public health authorities rather than have the out of state testing laboratory report**

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*Thank-  
you!*

