

# Optimizing the Public-Private Partnership for Rapid Tuberculosis Laboratory Testing

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## Background

- In California, specimens from patients with suspected tuberculosis (TB) are tested by both public health and private sector laboratories
- Local TB programs have noted instances of delay in specimen flow and reporting of results within private sector laboratories
- Delays can impact public health because drug-resistant organisms may be ineffectively treated, acquire further resistance, and be transmitted within communities for prolonged periods of time

## Objective

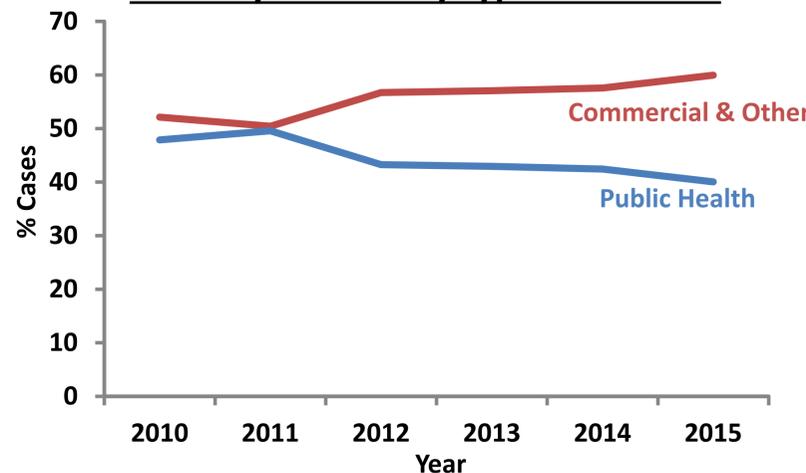
- Use surveillance data to describe public and private laboratory use
- Determine common contributors to delays
- Address delays with multiple interventions

## Methods

- Analyzed CA TB Registry data to describe proportion of cases with sputum cultures performed outside a public health laboratory
- Solicited reports of substantial delays from local TB programs
- Reports reviewed by program and laboratory staff to identify common contributors to delays
- Several interventions were implemented to address these contributors

## Results

**Pulmonary sputum culture positive TB cases by laboratory type 2010-2015**



Cochran-Armitage trend:  $p < .0001$

### Common Contributors to Delays

- Delays in reporting
  - Not reporting results to health department, only to provider\*
  - Not reporting preliminary results
  - Complex communication procedures
- Logistical procedures
  - Transport within facilities in the system
  - Sub-culturing each time isolates arrive
  - Not performing DSTs unless ordered\*
- Underutilization of rapid tests such as molecular detection of drug resistance

\*Required by CA Code of Regulations<sup>1</sup>

### Webinar

- Jointly presented by CA Microbial Disease Laboratory and CA TB Control Branch
- Invitation by official departmental correspondence
- Attended by >150 laboratorians from >55 laboratories
- 72 of 72 (100%) attendees who evaluated the webinar indicated the presentation increased their knowledge of the subject matter

### Was there anything you found particularly effective about the course?

- "The importance of timely reporting was emphasized throughout the entire presentation."
- "Explaining the hierarchies of reporting to the public health lab or what to further do if a lab discovers a TB culture"
- "The explanation of how pyrosequencing works is very helpful"
- "How and when to send isolates for confirmation/testing"
- "Collaboration between TB control program and laboratory"
- "The importance of molecular methods to decrease turn round time of TB testing"
- "The expertise is amazing. Thanks for a great presentation"

### Toolkit for Working with Private Laboratories

- 10-page written guide for local TB programs
- Developed with information gained from:
  - Conference calls with commercial laboratories
  - Experience with customer service
  - Reports from TBCB program liaisons and local TB program staff
- Includes contact information for three large commercial laboratories and State MDL
- Tips to guide communication and understand specimen flow  
(Copies available for viewing purposes, please ask!)

## Conclusions

- Private sector laboratories play an increasing and critical role in the diagnosis of TB in California
- Interventions to build channels of communication and increase knowledge of reporting guidelines between local TB programs and private laboratories had good qualitative outcomes

## Limitations

- Challenges were detected by passive reporting and assessed qualitatively

## Next steps

- Continue building communication and partnerships to improve timeliness in TB specimen flow, processing, and reporting
- Integrate input from seven local TB programs currently piloting the toolkit (Yolo, Humboldt, El Dorado, Alameda, Los Angeles, San Francisco) and distribute toolkit to all TB programs
- Analysis in progress on turnaround time of DSTs for multidrug-resistant TB patients by laboratory type

For more information, please contact  
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**Acknowledgments:** Local TB control programs, local public health laboratories, commercial laboratories, TB program liaisons

**References:** 1) Cal. Code Regs. tit. 17, § 2505