



Evaluation of Electronic Reporting of Interferon-Gamma Release Assay

Results for Public Health Surveillance — California, 2016–2017

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Background

- Treatment of latent tuberculosis is key strategy for tuberculosis elimination
- In 2016, CDPH began accepting voluntary electronic reporting of interferon-gamma release assay (IGRA) results into CalREDIE, the CDPH web-based reporting platform
- CDPH recommended using specific Logical Observation Identifiers Names and Codes (LOINCs)
- Electronic reporting should use one LOINC for each component: nil, mitogen - nil, TB antigen - nil, and interpretation

Objective

To evaluate:

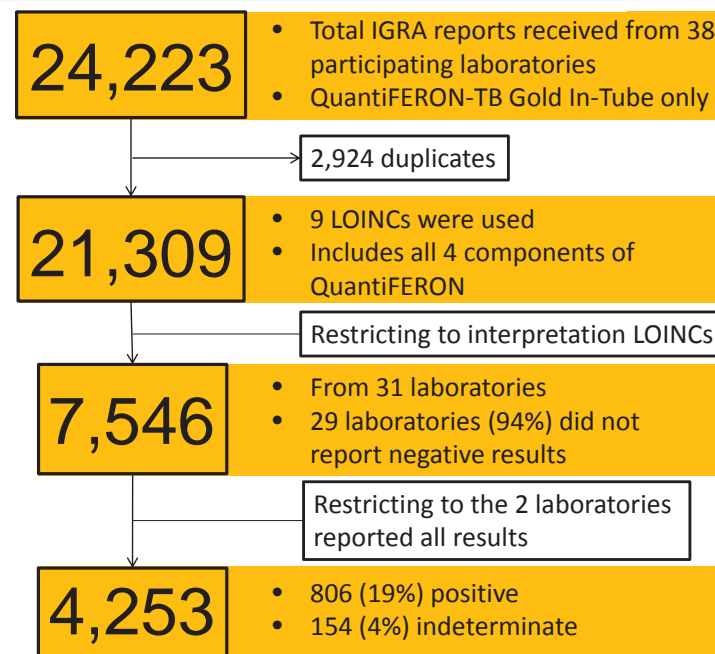
- Quality of IGRA data in CalREDIE
- Potential of IGRA data for LTBI surveillance
- Public health use of IGRA results by local TB control programs

Methods

- Data for IGRAs reported to CalREDIE during August 2016–June 2017 was extracted from the Data Distribution Portal
- Performed descriptive statistical analysis for IGRA results
- used REDCap to survey all 61 local health jurisdictions (LHJs) regarding results use
- >1 response/LHJ was allowed

Acknowledgments: We thank laboratories that initiated IGRA reporting, CalREDIE help desk for providing technical support, LHJs for their participation in the survey, and the TB control branch of CDPH for following up on next steps of this project

Results

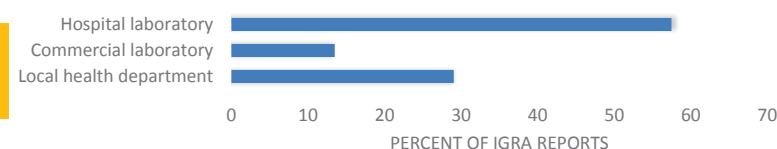


Frequencies of LOINCs used in electronic reporting of QuantiFERON results to CalREDIE (N=21,309)

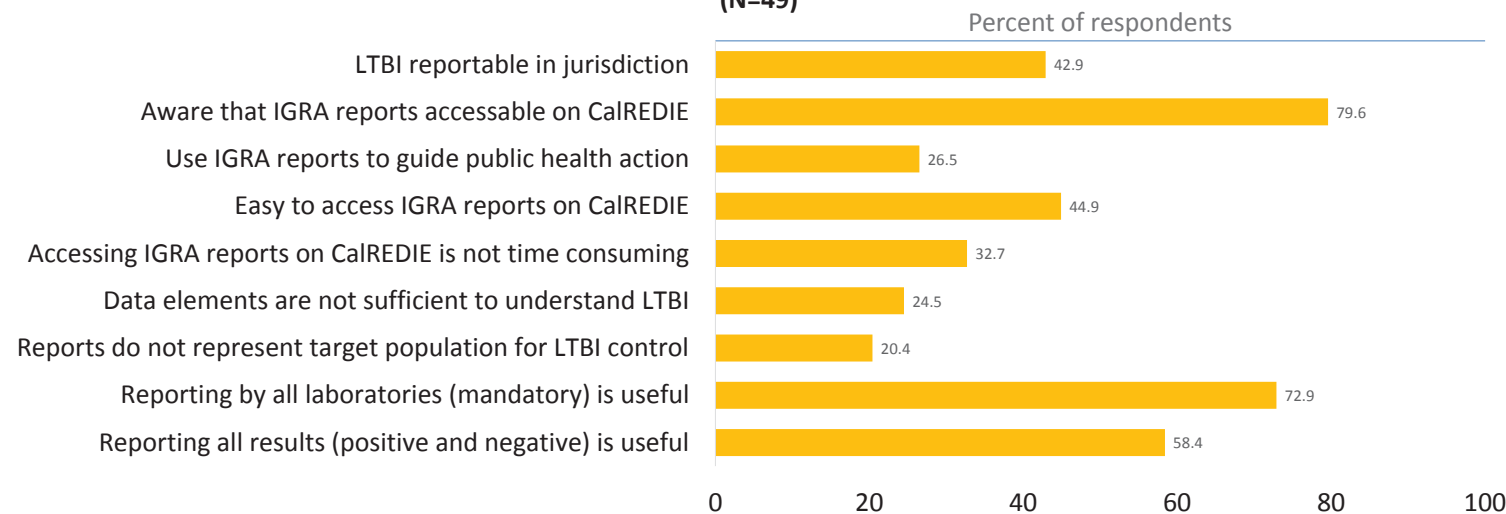
Test description	LOINCs	Count	Percent
Nil (Negative Control)	71776-9*	4433	21.80
	71774-4*	4718	22.14
Mitogen – Nil (Positive Control)	39017-9	1718	8.06
	46216-8	58	0.27
	71772-8	28	0.13
Antigen – Nil	64084-7*	1801	8.45
	46217-6	977	4.58
Calculation of positive, negative, or indeterminate (interpretation)	45323-3	5249	24.63
	71773-6*	2297	10.78

*LOINC recommended by CDPH

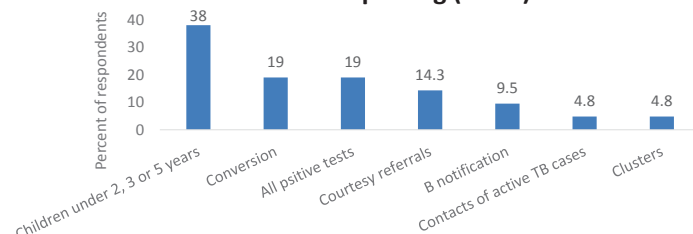
Distribution of IGRA reports by reporting facility type (N=21,309)



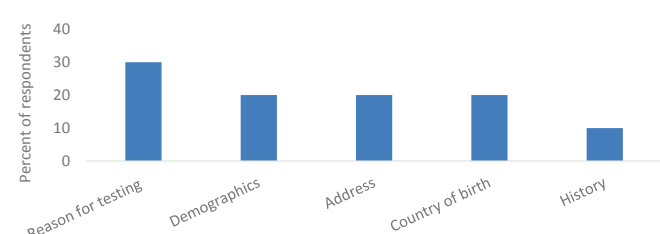
Summary of important survey responses on the quality and uses of electronic reporting of IGRA results (N=49)



Conditions for which LTBI is reportable in LHJs with LTBI reporting (N=21)



Data elements needed to understand LTBI (N=10)



Conclusion

- Electronic reporting of IGRA results is potentially useful for LTBI surveillance
- IGRA data quality would be improved by eliminating duplicates and consistent and complete reporting of test components using recommended LOINCs
- Most LHJ respondents thought mandatory laboratory reporting of all IGRA results would be useful
- Some LHJs use results for public health action; however, training concerning data access might expand IGRA results use in TB control efforts

Limitations

- Estimating number of tests performed is challenged by variation of LOINCs used
- Limited reporting of negative results restrain the understanding of target population for LTBI screening

Next Steps

- Propose mandatory reporting of IGRA results by laboratories, including negative results
- Establish and disseminate recommended LOINCs for QuantiFERON-Plus assay
- Training LHJs on how to find and use IGRA reports in CalREDIE
- Investigate how to capture TB risk factors in IGRA reports

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