

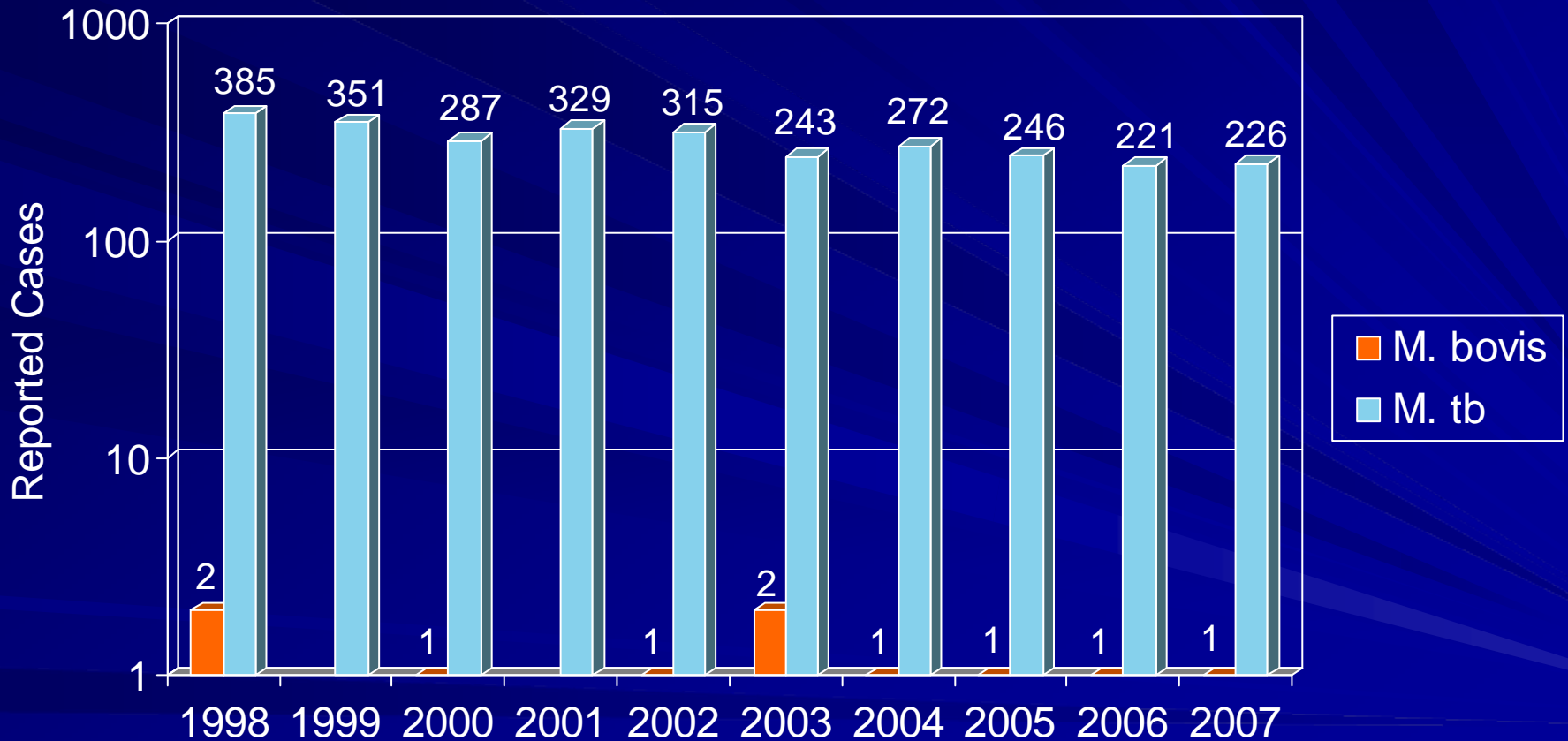
# Public Health Response to Endemic Bovine TB

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MDCH

# Overview

- Incidence of *M. bovis* and *M. tuberculosis*
- Response to human exposure
  - Follow-up & testing
- Response to endemic disease
  - Education & outreach

# Incidence of *M. bovis* and *M. tuberculosis*, Michigan, 1998 - 2007



# Human Cases of *M.bovis* Disease, Michigan, 1998 - 2007

<u>DATE</u>	<u>SEX / AGE</u>	<u>SPECIMEN</u>	<u>DMU 452</u>
1998*	F 32	Sputum	
1998	M 42	Abd. Abscess	
2000	M 62	Neck	
2002**	M 74	Bronchial	Y
2003*	M 19	Sputum	
2003	F 79	Lymph Node	
2004**	M 29	Hand Wound	Y
2005*	M 34	Lymph Node	
2006*	F 32	Lymph Node	
2007	M 90	Elbow	

\* Migrant worker from southwestern states

\*\* Same strain as Michigan's deer strain

# Response to Human Exposure to *M. bovis*

MDA notifies MDCH of positive cattle herd  
-- Include # cattle, owner name & contact info



MDCH notifies local health department



Local health department F/U with family  
-- Educate and place TST on family members  
-- If TST (+), evaluate for prophylaxis or treatment

\* Positive deer followed by DNR, not through public health.

# Overview of Positive Herd Referrals

<i>M. bovis</i> positive herds:	44
Herds with complete data available:	33
# of people ID'd for testing:	41
# of individuals refusing test:	11
# of individuals TB skin tested:	30
# of individuals with negative TST	28
# of individuals with positive TST	2

# Response to Human Exposure to *M. tuberculosis*

Local health department notified of case or suspect case  
--Hospital, private practitioner, lab report



Local health department  
notifies MDCH

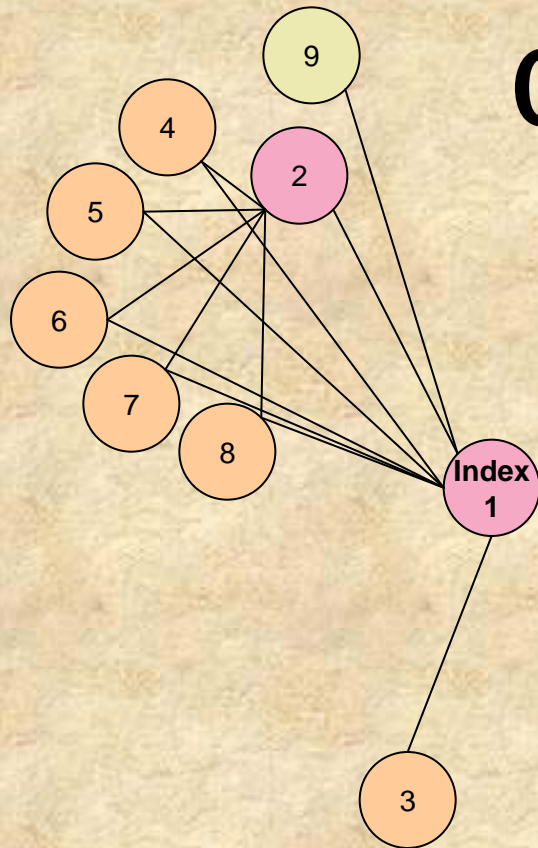


Local health department initiates investigation  
--Assess patient environment  
--Interview patient to identify contacts  
--Attempt to locate contacts  
-- Educate contacts and place TST  
-- If TST (+), evaluate for prophylaxis or treatment



Expand investigation?  
Additional contacts?

# Contacts Living with Index



^Questionable Chest X-Ray, needs evaluation by pediatric ID physician

†Positive PPD in Past, CXR Negative

--- Possible connection

## Legend

● Active TB, Adult

● Active TB, Child

● Latent TB, Adult

● Latent TB, Child

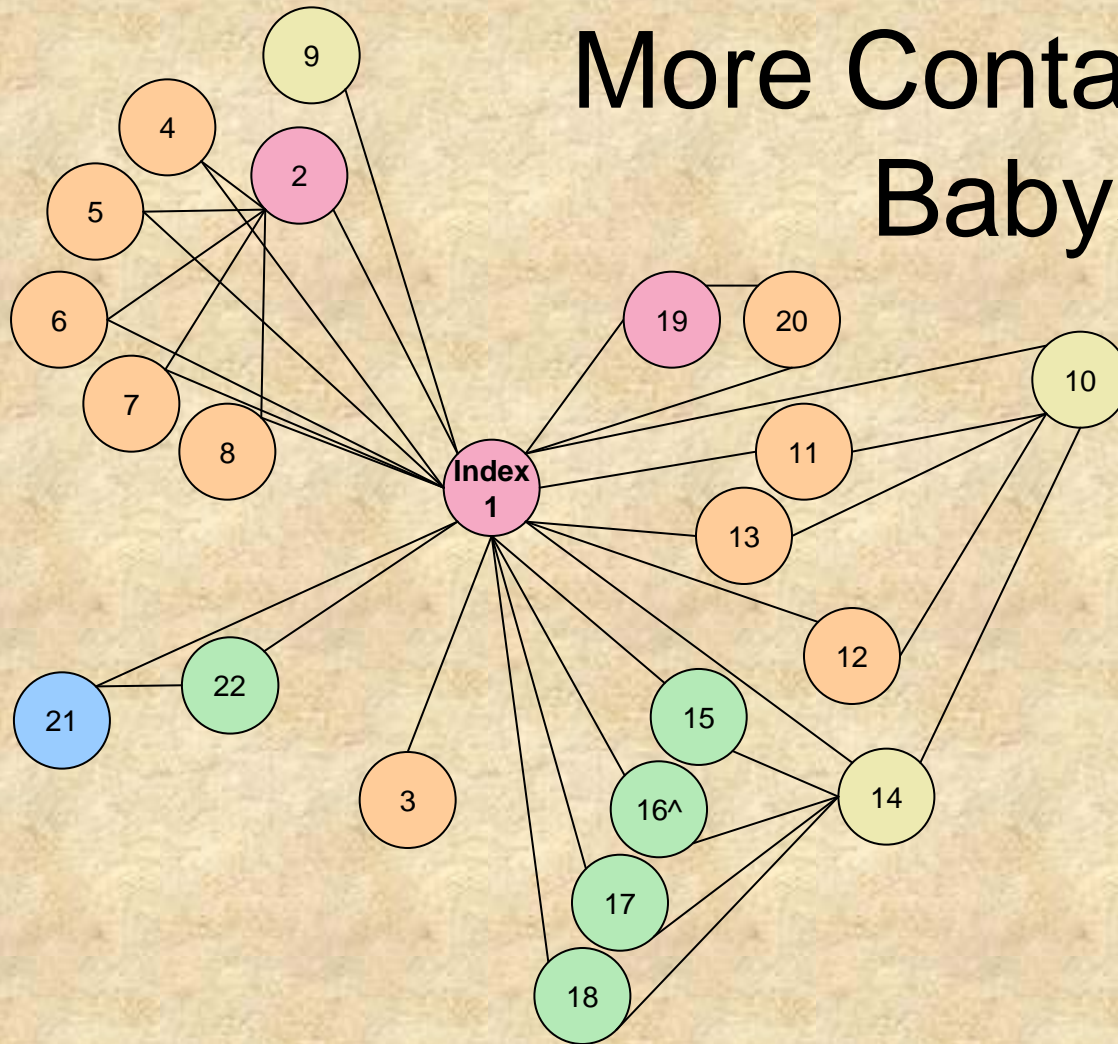
● PPD -

● PPD-, Age <5 & Needs Further Evaluation

● PPD Not Done Yet



# More Contacts Index Babysat



^Questionable Chest X-Ray, needs evaluation by pediatric ID physician

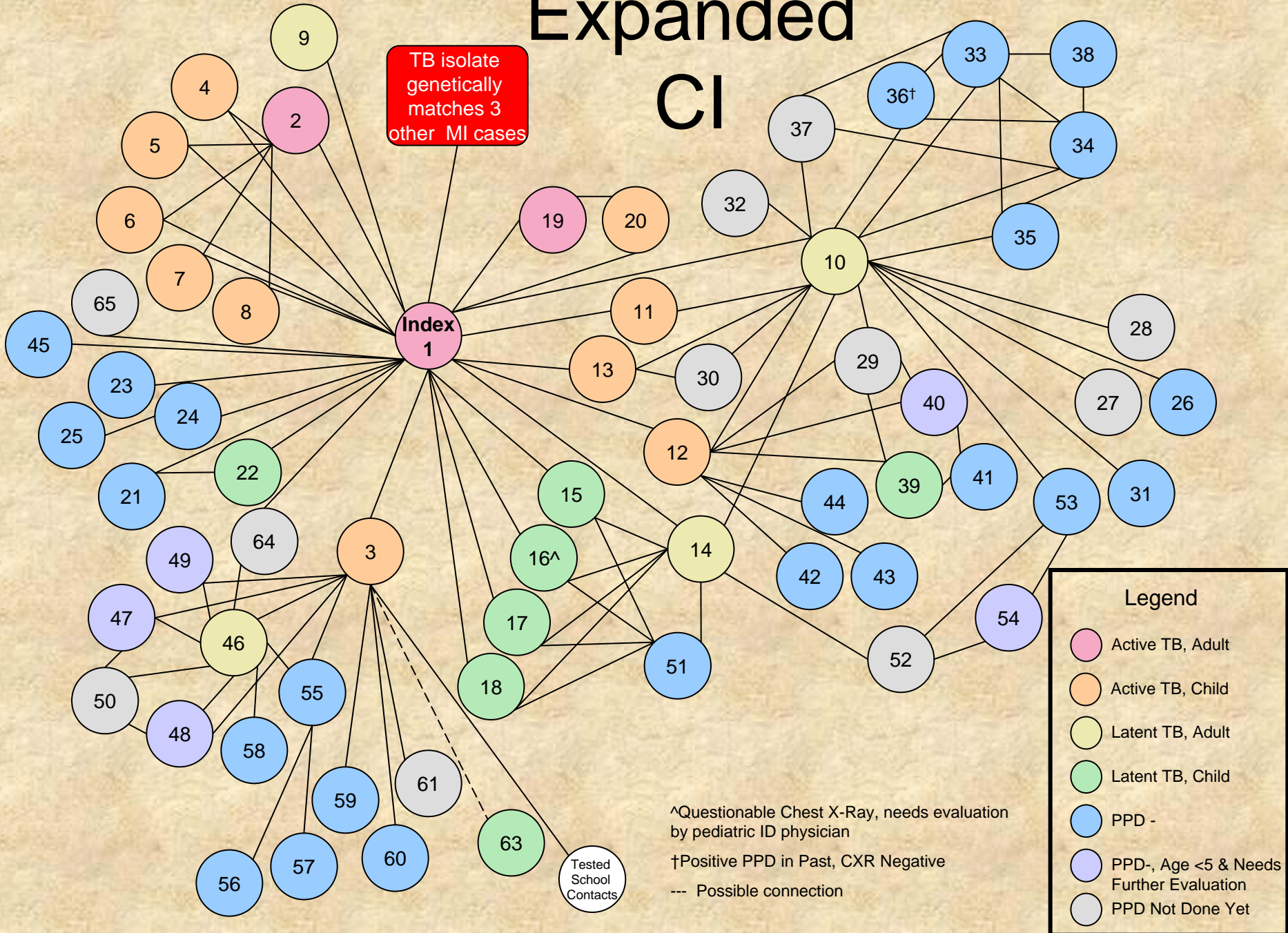
†Positive PPD in Past, CXR Negative

--- Possible connection

Legend	
<span style="color: pink;">●</span>	Active TB, Adult
<span style="color: orange;">●</span>	Active TB, Child
<span style="color: lightgreen;">●</span>	Latent TB, Adult
<span style="color: lightgreen;">●</span>	Latent TB, Child
<span style="color: blue;">●</span>	PPD -
<span style="color: lightblue;">●</span>	PPD-, Age <5 & Needs Further Evaluation
<span style="color: lightblue;">●</span>	PPD Not Done Yet

# Expanded

# CI



# Back to Bovine TB...



# Education and Outreach

- State & local public health collaborate with many agencies
  - MDA, DNR, MDCH, USDA, MSU
  - Public & private stakeholders, press
  - Target producers and consumers
- Producers
  - Strategies to keep cattle free of *M. bovis*
  - Strategies to break transmission among deer and between deer and cattle
  - How to respond if *M. bovis* is detected
- Hunters
  - Risk activities
  - Avoiding or mitigating risks (e.g. handling and cooking)
  - Hunting & Trapping Guide through DNR
  - How to access additional information and care

# Additional Information

- <http://www.michigan.gov/emergingdiseases>
- <http://www.michigantb.org>
- <http://www.michigan.gov/tb>

# Acknowledgements

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# Questions