From recommendation to real-world; integrating location-based investigative tools into routine TB contact investigations in Maryland

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PHASE Symposium

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Goals of the Project

- Train tuberculosis control staff in Maryland to implement a one-page location-based tool into their regular contact investigations
- Measure number of contacts yielded from the location-based tool
- Determine challenges in implementing the tool
- Update training course for use in other consortium sites

Contact Investigations: Purpose

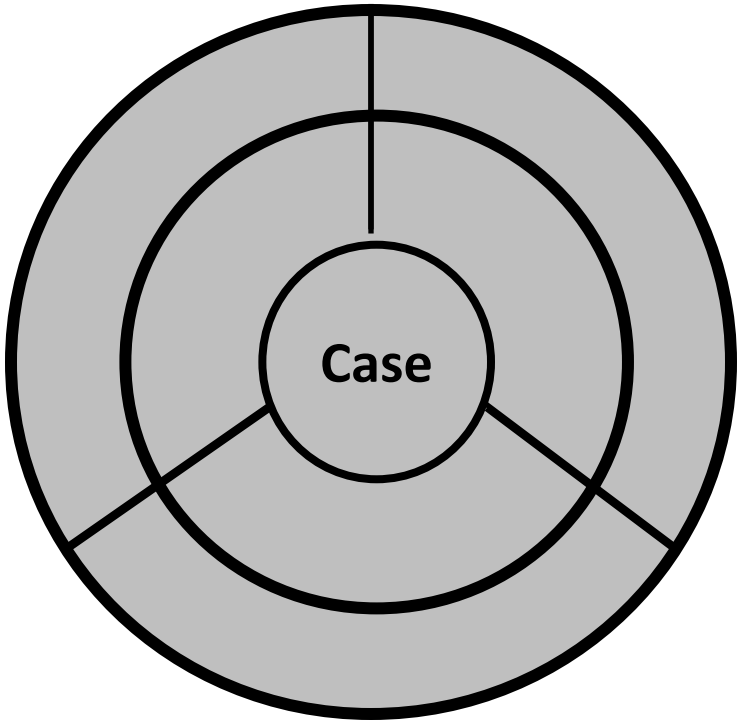
- **Identify** contacts of infectious patients
- **Screen** contacts for latent infection or active disease
- **Treat** infected contacts
- **Prevent** future outbreaks

What's Missing in TB Contact Investigations?

- In MD, 5-year genotyping data revealed that nearly 40% of secondary cases for whom we know the source case were **not listed on that source's contact list.**
- **Where** were they when they were exposed to that source?
- **How** can we find them?

Location, Location, Location

Home



Work

Location-based questionnaire!

About the Location-based Tool

- Prompts the investigator to ask about/record locations
- Prompts the patient to think about where they spend time
- To be incorporated into the regular contact investigation interview

TO 26 Location-based contact investigation form

1. **During the daytime hours (6 am – 5 pm) where do you usually spend time with other people?**

Place name	Location (address/zipcode)	Activity

2. **During the early evening hours (5 pm – 10 pm) where do you usually spend time with other people?**

Place name	Location (address/zipcode)	Activity

3. **During the night-time hours (10 pm – 6 am) where do you usually spend time with other people?**

Place name	Location (address/zipcode)	Activity

4. **Can you think of any other regular weekly or monthly activities where you usually spend time with other people?**

Place name	Location (address/zipcode)	Activity

Training of TB Control Staff

- Took place in three Maryland counties
- Provided an overview of the study and tool
- Used mock scenarios to demonstrate use of the tool
- Demonstrated a standardized method for recording results generated from the tool

Example Training Slides

Scenario 1: Index Case Profile

- Index case: Neil Diamond
- 68 y/o white male
- Sputum AFB smear positive TB suspect
- Reported coughing for 3 months
- Lives with wife (Caroline) in a Fells Point row house
- Occupation: wedding singer; Baltimore Children's Community Chorus director

Scenario 1:
Where Do You Spend Time?

Index case: Neil Diamond

During the <u>daytime</u> hours (6 am – 5 pm) where do you usually spend time with other people?

Place Name	**Location (address/zipcode)**	**Activity**
Jimmy's Restaurant	Broadway, Fells Point 21231	Coffee, breakfast, chatting with waitresses, reading the paper
Home	1700 Aliceanna St, Fells Point 21231	Watching TV
North Broadway	278 North Broadway, Baltimore	Soup kitchen sever

Scenario 1:
Where Do You Spend Time?

Index case: Neil Diamond

Can you think of any other regular weekly or monthly activities where you usually spend time with other people?

Place Name	**Location (address/zipcode)**	**Activity**
Ding How Restaurant	Broadway and Aliceanna St, Fells Point	Singing at karaoke night
Reflections Banquet Hall (work)	Inner Harbor, Baltimore, MD	Singing at weddings

Names and locations of contacts identified - TO 26 location-based form project
FOR STUDY PURPOSES ONLY
Name of patient: Neil Diamond
Date completed: 25 February 2010

Traditional contacts		**Location identified contacts**	
Includes household, close family/friends, work, and school contacts		Includes all contacts found in locations other than household, work, and school, and close friends/relative **PLUS** any contacts from household, work, and/or schools that are picked up during the location based probing	
Location	**Name**	**Location**	**Name**
Home	Caroline Sweet (wife)	Work (Banquet Hall)	Neil Young (sound engineer)
Work (Banquet Hall)	Tom Jones (wedding singer)	Jimmy's	Marilyn Monroe (waitress)
Work (Choir)	Rosemary Clooney (choral co-director)	Ding How Karaoke	Englebert Humperdink
		N. Broadway	Elvis Presley

Results

- Tool proved more difficult to employ than originally perceived
  - What was missed during the training?
  - How can we rectify that?
- Counties are still in the process of using the tool and reporting the data

Location	# Contacts	From Traditional CI	From Location-based Tool
Home	5	5	0
Work	3	3	0
School	0	0	0
Tavern/bar	0	0	0
Card games	Pending	Pending	Pending
Wedding	Pending	Pending	Pending
Birthday Party	Pending	Pending	Pending
Illicit Activity	0	0	0
Other	0	0	0
Total	8	8	0

Staff Feedback About the Tool

- Language and cultural barriers are not addressed
- Tool needs to include occasional or “one-shot” events (parties, weddings, etc)
- Tool does not specify the time period that investigators should ask about

Lessons Learned

- The most important point was that it was not clear to staff that the point of the tool is simply to facilitate queries about locations **as part of routine contact investigations**

- **Next steps**: take measures to clarify the use and purpose of the tool!

Recommendations

- Emphasize salient points in training
  - Not meant to address cultural/language barriers; use translation services as per CI protocol
  - Meant to be used as an interviewing tool by contact investigator DURING the contact investigation
  - Patient should be asked about activities during period of infectiousness per CDC definition (as already used for collecting contact names)

Recommendations

- Employ mock interview sessions in training using currently developed scenarios
  - Emphasize simplicity and expeditiousness
- Add a section to the tool asking about occasional/one-time social events
- Continue testing the tool in Maryland
- Employ social network analysis to determine novel “hotspots” of transmission

Summary

- After initial discouragement, we realized that staff feedback will be tremendously helpful in reshaping the training
- The recent response from the three health departments is encouraging; we'll keep collecting data and feedback

Acknowledgements

- Wendy Cronin
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Questions?