

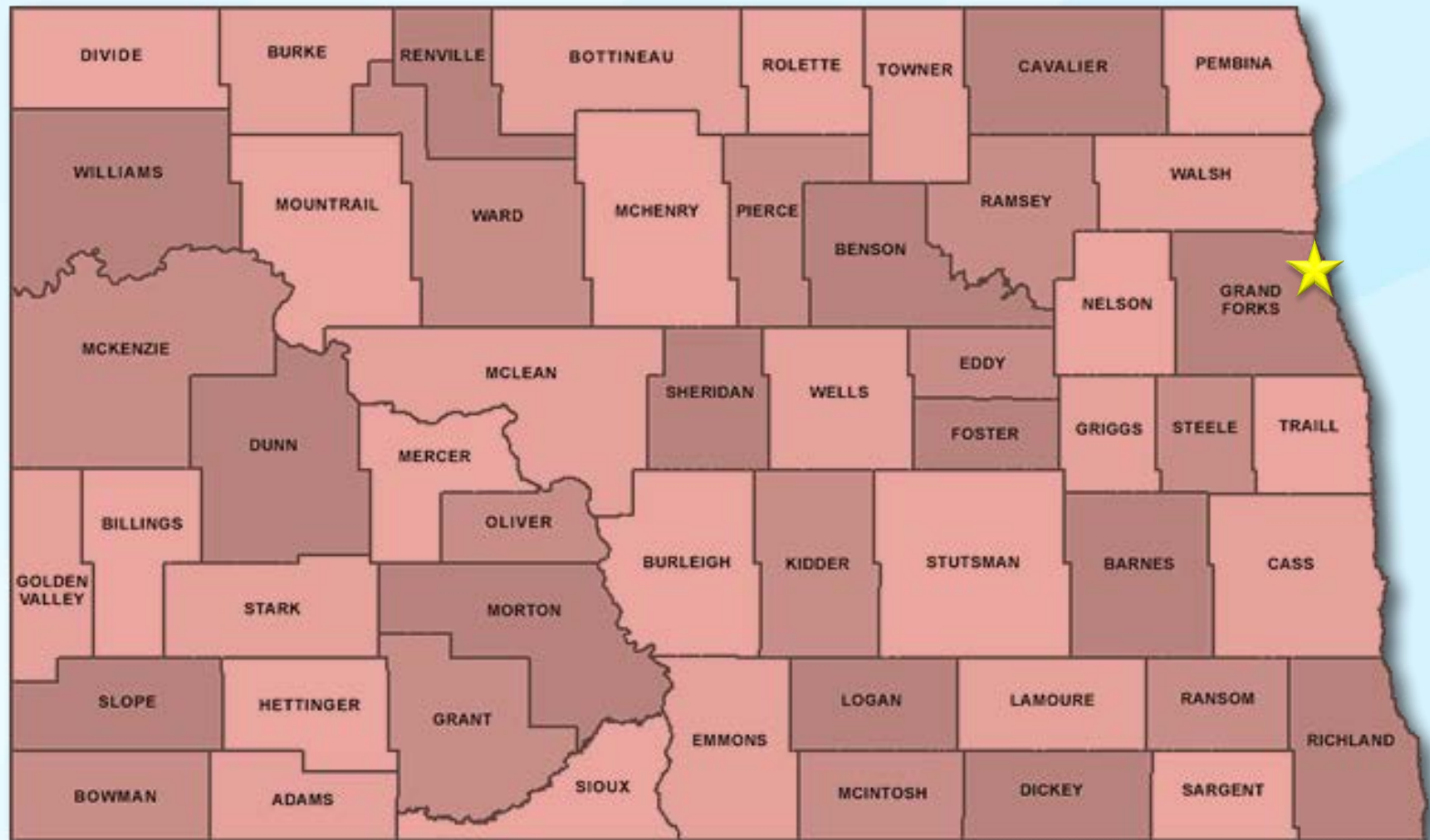
TB Outbreak Among Off-reservation, Homeless Native Americans

Dawn Tuckey, MPH

Program Consultant
Field Services Branch
Division of Tuberculosis Elimination



North Dakota TB Outbreak in the American Indian Population



What were the risk factors involved in this Outbreak?

- Homeless
- Large number of Household Contacts
- Substance Abuse (alcohol and street drugs)
- Small children and babies
- In 2012, 53% of named contacts were Latent TB Infections (LTBI)

Public Health Challenges

- 7 Days a week Directly Observed Therapy (DOT) for all cases and Directly Observed Preventive Therapy (DOPT) for all Children
- Increased demand for TB testing
- Lack of Food and Housing
- Compliances Issues:
 - * Wearing Masks
- Use of Incentives

How Many Were Involved In The OUTBREAK?

- ✓ *31 TB Cases*
- ✓ *100 Latent TB Infections
(LTBIs)*
- ✓ *1800 Contacts*

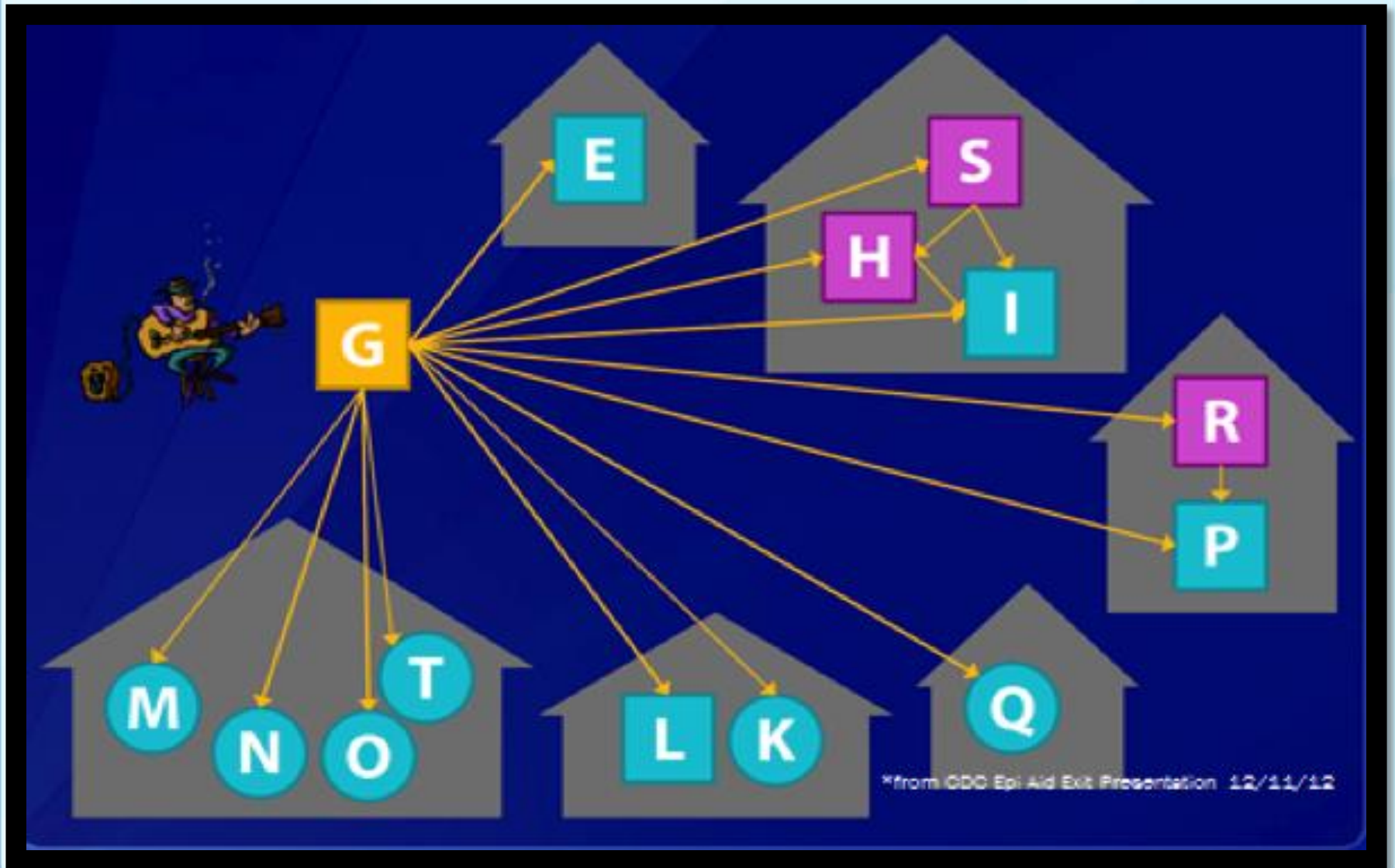
Super Spreader

- AFB smear 4 +
- Prolonged infectious period for 11 months
 - Delay in seeking medical treatment
 - Misdiagnosed
- Highly infectious-documented contact of less than 8 hours for conversion

Super Spreader

- Poor historian and would/could not provide any contacts
- Lead band singer
- Lived in friends backyard in a tent
- In and out of jail
- Stayed at local shelter

Super Spreader



Other areas of Concern

- Low-incidence state with limited resources
- Homeless shelter
- Correctional facility

Continued areas of Concern

- Lack of Infrastructure to deal with an increase of this magnitude
- Large number of contacts
- 100 LTBI's
- Difficult patients that required a lot of attention

Challenges

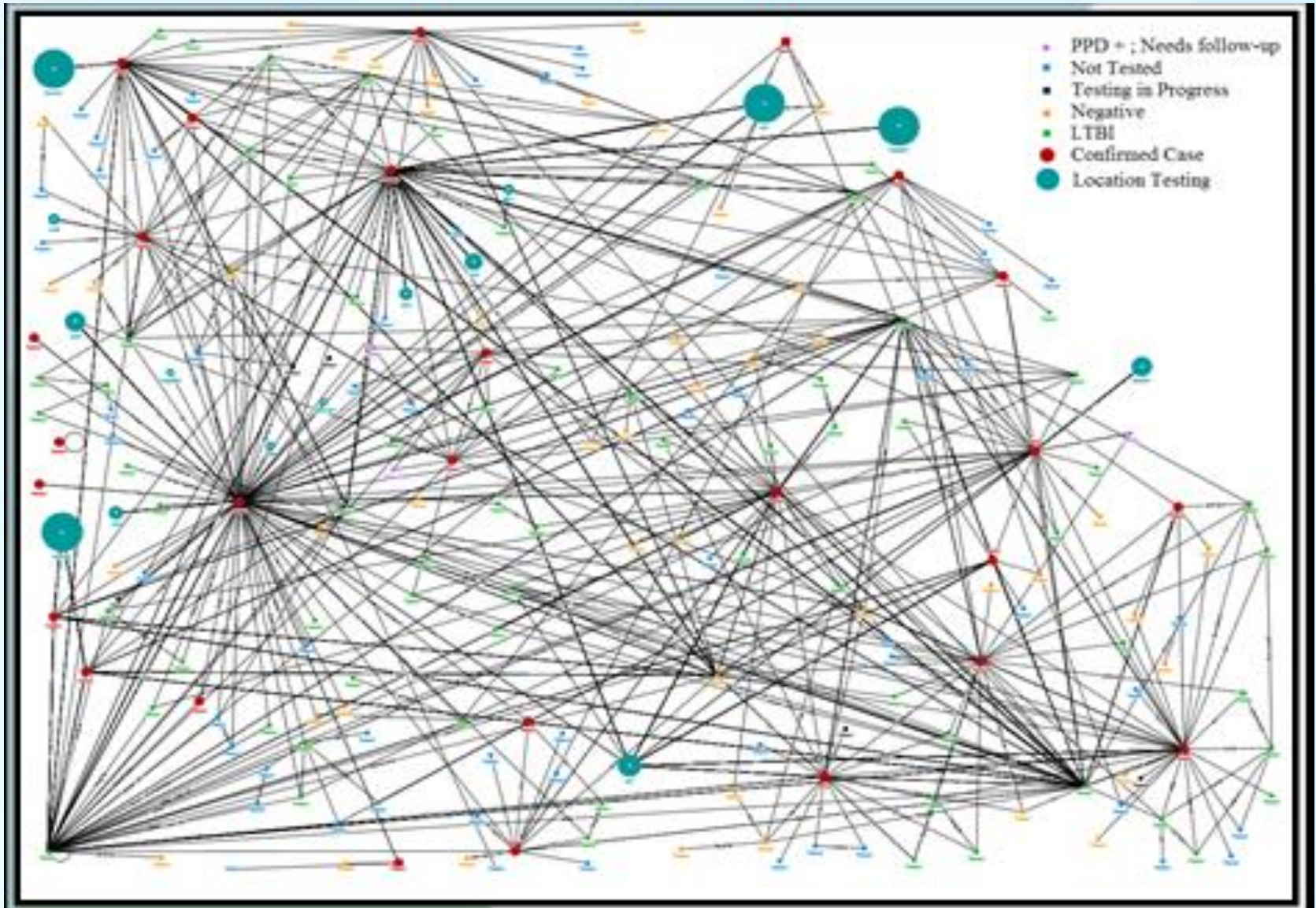
- Staffing—added Field Staff & Public Health Associate
- Housing—worked with Emergency Preparedness & Response
- DOT Compliance—7 day DOT
- Drug Levels—non-therapeutic levels

Challenges

- Indian Health Services –
Developing Partnership
- Border States and Provinces
- INH shortage
- Tubersol shortage

Challenges to Contain in order to Manage the Outbreak

- **Manage social barriers to treatment compliance**
 - **Isolation for infectious cases**
 - **Housing**
 - **Food**



Multi-Agency Coordination

- North Dakota Department of Health
- Grand Forks Public Health Department
- Indian Health Services
- Centers for Disease Control
- Regional Training and Medical Consultation Center (Mayo Clinic Center for TB)

North Dakota Department of Health's Role

- Overall responsibility for the outbreak and tracking other cases and contacts to other areas of the state
- Provided funds for housing, food, cable TV and other essential items for the cases

Great Plains Area Indian Health Service's Role

- Provided a nurse consultant who would help find hard to locate TB patients and contacts through their database
- Provided medical information from the IHS clinic
- Flagged medical charts for those contacts needing skin testing

CDC's Role

- Provide technical assistance, personnel and TB onsite training
- Assist with developing partnerships

Program Areas Identified through CDC Program Consultant's Assessment

- Several patients had low/trace levels of INH was DOT being administered properly?
- How were the contact investigations being conducted?

Program Areas Identified by CDC Program Consultant's Assessment (continued)

- Decentralized information regarding the evaluation and treatment of TB cases and contacts
- Lack of case management
- New State TB Controller

Program Areas Identified through CDC Program Consultant's Assessment (continued)

- Need for basic TB knowledge at the local level
- No one individual with complete knowledge of the outbreak
- Need for home isolation monitoring
- Job roles and responsibilities needed to be better defined

Program Areas Identified by CDC Program Consultant's Assessment (continued)

- Signs and symptom check was not being conducted during DOT
- Three different electronic systems with no interfacing
- Identified training and educational needs

CDC help is on its way

**Sent a Public Health Advisor for a
month**

Objectives for the Public Health Advisor

- Provided general oversight of TB cases and contacts
- Shadowed epidemiologist and DOT nurse for field and interviewing skills
- Identified and provided recommendations on the decentralized data systems
- Assisted the LHD in tracking the LTBI

Objectives for the Public Health Advisor

- Provided overall guidance to the program
- Re-prioritized the list of contacts
- Re-interviewed TB patients
- Established database management system
- Helped establish ongoing TB testing at the jail, shelter and temporary labor companies

More help is on the way!



Regional Training and Medical Consultation Centers (RTMCCs) Nursing Consultants

**Two nurse consultants were sent
for a week to provide on-site
training**

Objectives for the Nurse Consultants

- Provided training on case management of TB cases and LTBI
- Assessed contact investigation process
- Reviewed field nurse documentation and records management
- Shadowed DOT nurse
- Identified dosing concerns with pediatric cases and set up call with RTMCC pediatric physician

Objectives for the Nurse Consultants

- Identified unreasonable treatment protocols and drug monitoring issues
- Provided recommendations to address these concerns
- Built peer relationships
- Provided ongoing case management with new cases

Staff attended RTMCC training courses

- TB Nurse Case Management
- TB Clinical Intensive
- TB Contact Investigation:
Interviewing Skills Course

Requesting CDC Outbreak Help

- Have the State talk with your CDC TB Program Consultant
- Submit a request based on needs
 - ✓ Epi Aid/Technical Assistance
 - ✓ Programmatic Assessment
 - ✓ Additional Funding
 - ✓ CDC Public Health Advisor
 - ✓ Training and Education



Acknowledgements

- North Dakota Department of Health
- Grand Forks Health Department
- Great Plains Area Indian Health Service
- Dee Pritschet, North Dakota TB Program Coordinator

IF YOU HAVE ANY QUESTIONS JUST ASK:)
THANKS FOR LISTENING

