COHORT REVIEW

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COHORT REVIEW: OVERVIEW

- **CRITICAL TOOL**
  - **CDC grant requirement for funding**
    - **Outcomes – linked to funding & part of suite of evaluation tools**
    - Desktop epidemiological review, audit, cohort review, annual progress report,etc
  - TX Cohort Review Forms and process established by HSR, DSHS, and LHDs workgroup
- **COHORT REVIEW PROCESS** (def) – Systematic review of TB patient management and contacts
  - **COHORT** (def) – Group of TB cases counted over a specific time period, and in Texas that is a year

Cohort Review: History

- Process developed in Africa
  - Specifically to provide local clinics with necessary tools for complexity of TB control
    - To understand staff & resources needed to improve diagnosis of TB disease, initiate & complete tx, monitor adherence

- Huge Success! – led NYC Medical Director
  - To implement in NYC program, and eventually went to all funded CDC TB Programs
  - Saw improvement of completion rates
  - Saw improved use of clinical resources & staff
  - **NYC reported sharp decline in reported cases of MDR TB, from 441 cases in (1992) to 38 (in 1998) – huge success!**

COHORT PERIODS

- **By reviewing prior year's case cohort, the Epidemiology Evaluation Team can assess case management and patient outcomes**

Cohort Period & Submission Schedule	
Cohort Period Cases Counted In:	**Are reviewed and reported by:**
1st **quarter** (Jan 1 to Mar 31) current year	**March 31** of the following year
2nd **quarter** (Apr 1 to June 30) current year	**June 30** of the following year
3rd **quarter** (July 1 to Sep 30) current year	**September 30** of the following year
4th **quarter** (Oct 1 to Dec 31) current year	**December 31** of the following year

COHORT REVIEW GOALS

- **Ensure accountability**
- Educate staff about protocols/goals
- **Improve case management & prevention efforts**
  - Staff will see day-to-day efforts reflected in cohort review process months later
  - Builds accountability for services provided
- **TB staff are responsible for:**
  - **Ensuring *identification of high and medium priority contacts***
  - ***Having patients/contacts who start tx to finish tx***

Clarifying CASE REVIEWS from cohort reviews

- **CASE REVIEWS –**

  Regular review of individual patient's clinical course and tx by health care providers involved in process of **direct patient care**

  - **Real-time, ongoing**
  - **Opportunity to review each patient's specific care**
  - Weekly, or once every two weeks basis
  - Possible Participants: TB physician, clinic nurses, case registrar, contact investigator(s), outreach staff, and epidemiologist

- **PURPOSE**

  - **Review one case at a time**
  - **Discuss** clinical status, adherence, treatment status, CI status, timeliness, issues (i.e. a loose snake in house, etc)

COHORT REVIEW vs CASE REVIEW

- **Cohort Review** different – more quantitative & **retrospective**, **more epi based** – concern for outcomes

- Quantitative blend of program review & epidemiologic review of treatment (tx) outcomes
  - Reveals program strengths/ weaknesses
  - Shows needs for staff training/professional education
  - Increases tx completion, case mgmt processes & contact identification

COHORT REVIEW CHALLENGES

- Can be a challenge >> new process compared to case review

- Requires systematic commitment to:

  - Ongoing quality assurance process
  - Making necessary programmatic changes

  - Updating policies and procedures
  - Training & motivating staff

  - Following up and fixing problems identified

TB Jurisdictions – changes paradigms

Health Service Regions' Tuberculosis Cohort Review Infrastructure

Health Service Region 1
LHDs in Regional Cohort Case Count
Amarillo

Health Service Region 4/5N
LHDs in Regional Cohort Case Count
Cherokee
Smith

Health Service Region 2/3		
LHDs in Regional Cohort Case Count		
None		
	Report to the Region	
Report to Central Office	Brown	Scurry
Tarrant	Grayson	Taylor
Dallas	Hunt	Wichita
Collin	Navarro	Denton
	Nolan	

Health Service Region 6/5S
LHDs in Regional Cohort Case Count
Montgomery
Brazoria
Chambers
Hardin
Orange
Report to Central Office
Beaumont
Port Arthur
Galveston
Houston
Harris
Fort Bend

Health Service Region 7
LHDs in Regional Cohort Case Count
Waco/Mclennan
Milam
Brazos
Williamson
Hays
Report to Central Office
Austin-Travis

Health Service Region 8
LHDs in Regional Cohort Case Count
Uvalde
Victoria
Medina
Comal
Report to Central Office
San Antonio

Health Service Region 9/10
LHDs in Regional Cohort Case Count
Midland
Andrews
San Angelo
Report to the Region
Ector
Report to Central Office
El Paso

Health Service Region 11
LHDs in Regional Cohort Case Count
San Patricio
Live Oak
Report to Central Office
Cameron
Hidalgo
Nueces
Webb-Laredo

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CDC Mandate for Enhanced Evaluative Processes

- Complies with CDC Mandates for enhanced review and evaluation of outcomes
  - Easy source of already prepared data with limited extra workload for jurisdictions
  - Will be linked to desktop review system to be instituted in year
  - Will be linked to additional training needs to ensure performance measures established by CDC are met

Cohort Review Process

- Scheduling
  - TB Program Manager will coordinate and schedule case review dates with nurse case managers and staff
  - A calendar of case reviews needs to be created
  - All cases during the quarter are to be reviewed, not a subset

Cohort Review Process

- Preparation
  - Pull medical records
  - Prepare a calendar of case reviews
  - Notify staff of dates & ensure that nurse case managers/nurses prepare their individual case reviews
  - Reserve room quarterly for meeting with all clinical and programmatic staff
  - Ensure that have satellite clinics nurses/staff participating to know what is and what is not working

Cohort Review: Process of reviewing cohort cases

- TB program mgr & medical reviewer
  - Listen to case presentations
  - Ask for details of staff efforts to solve problems
    - e.g., trace LTFU patients
    - provide feedback on issues
  - Suggest how to follow up on the patients & their contacts
- More time on difficult cases
  - Noncompliance, MDR/XDR TB, high # contacts, congregate settings

Cohort Review: Process of assessing programmatic needs

- Data analyst updates registry information and notes items requiring follow up (F/U)
  - At Cohort Review end, analyst evaluates objectives & prepares summary
  - Review of lapses in protocols, missing information, or incorrect info is noted and summarized
  - The Health Authority/Medical Director may use specific cases as examples of how to address certain ongoing or continuing problems
  - Needs for staff training & professional education are identified

Major Findings

- Data analyst should prepare major key findings that were revealed from all of the cases reviewed

  - Perhaps interviewing skills need to be enhanced if the community TB rate is higher than anticipated rate of TB in community
  - Call to TB Branch to discuss education options for staff
  - Documentation of lost to follow up processes since this is shown to be an issue needing to be addressed
  - Needs for staff training & professional education are identified
  - Complete evaluation and treatment completion rates are low

Issues that should be addressed

- **Issues to address**
  - Not all clinical or satellite staff are involved in cohort review process
  - Increasing number of cases from prior cases
  - A cluster has occurred per the CDC definition for a genotyped cluster
  - Issues that were identified in a state prior audit are still occurring
  - Performance measures are consistently not met

Reporting & Documentation

- **Who needs to report**: all HSRs and funded LHDs TB clinics
  - DSHS HSRs TB programs will work with low morbidity LHDs in their jurisdiction to implement cohort review process

- **Documentation**
  - Case Registrar provides **list of cases** from cohort year
  - Nurses prepare **Presentation Forms**
  - **Summary Form** shall provide summarized and quantifiable data from all counted cases and associated contacts presented at each quarterly cohort review.

Old Data Reporting Elements

❖ Old Data Reporting Elements

- **Completed Cohort Review Summary Form**
  - Submit electronically to TB and Hansen's Group Manager by dates identified
  - Record every date held
  - Report total # of patients reviewed
  - Report # of cases, pulmonary or smear positive cases, # cases (and %) completing treatment, # contacts identified and with or without disease, evaluated, starting and completing treatment

New Data Reporting Elements

- For QA reasons, a list of **all cases** identified during cohort quarter year shall also be included
  - **Send through the PHIN** for security purposes
- For QA reasons, send **ALL** Presentation Forms developed by nursing staff for **EACH** case reviewed
  - **Send through the PHIN** for security purposes
  - Provides key information for epidemiological evaluative analysis and QA review

Cohort Instructions are online

TEXAS Department of State Health Services

Tuberculosis Services Branch
Cohort Review Presentation Form (Instructions)

Quarter: ☐ Q1 ☐ Q2 ☐ Q3 ☐ Q4 Check the appropriate box for the quarter in which the case was counted	Cohort Year: Enter the year in which the case was counted	Presentation Date: Enter the date (month/day/year) the case was presented at the cohort review
Primary Case Manager:	Contact Investigator:	Treating Physician:

Section 1: Patient Information

Patient ID: This may be the RVCT number or a number selected by the local TB program	Date of Birth: Enter month/day/year
Patient Name:	Gender: ☐ Male ☐ Female
Date Case was Counted: Enter the month/day/year the suspect was classified as a case.	Country of Birth: The country in which the patient was born.

Medical Risks (check all that apply):

- ☐ Diabetes Mellitus
- ☐ Alcohol Abuse (within past year)
- ☐ Tobacco Use
- ☐ Silicosis
- ☐ Corticosteroids or Other Immunosuppressive Therapy
- ☐ Gastrectomy or Jejunoileal Bypass
- ☐ Age < 5 Years
- ☐ Recent Exposure to TB (contact to TB case)
- ☐ Contact to MDR-TB
- ☐ Weight at Least 10% Less Than Ideal Body Weight
- ☐ Chronic Malabsorption Syndromes
- ☐ Leukemia
- ☐ Lymphoma
- ☐ Cancer of Head
- ☐ Cancer of Neck
- ☐ Drug Abuse within Past Year ☐ TB Test Conversion in Last 2 Years
- ☐ Fibrotic Lesions (on chest X- ray) Consistent with Old, Healed TB
- ☐ Chronic Renal Failure
- ☐ Organ Transplant
- ☐ Other: _____

Code 900:
Test Date: Enter month/day/year_____ ☐ Not Offered ☐ Positive ☐ Negative ☐ Pending ☐ Refused
Date CD4 Count: Results CD4 Count: Enter CD 4 results here

Section 2: Diagnostic Information

Disease Site: Indicate specific site(s) of disease	Initial Chest X-ray Date: _____ ☐ Normal ☐ Abnormal ☐ Cavitary ☐ Not Done
Collection Date of Initial Positive AFB Smear:	Collection Date of Initial Positive MTB Culture:
Resistance: ☐ Yes ☐ No susceptibility results indicate resistance	If Yes, Resistant to: List all anti-TB medications for which drug

Section 3: Treatment Completion Information

Treatment Start Date: The date medication was started by month/day/year	Treatment Completion Date: The date medication was stopped due to patient successfully completing a full course treatment regimen by month/day/year
Collection Date of First Consistently Negative AFB Smear:	Collection Date of First Consistently Negative MTB Culture:

If treatment not completed, check all that apply: This refers to treatment not being completed at the time of the cohort presentation

- ☐ Still on Therapy (Planned Completion Date: _____)
- ☐ Treatment Interruption (☐ Adverse Reaction ☐ Patient Non-adherence ☐ Provider Decision)

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Cohort Instructions

TEXAS Department of State Health Services

Tuberculosis Services Branch
Cohort Review Presentation Form (Instructions)

□ MDR	□ Refused (Reason:_____)
□ Lost	□ Died (Date: _____)
□ Reported at Death	□ Moved out of Country(To: _____)
□ Inter-jurisdictional Transfer (To: _____	Date: _____)
□ Other: If the above options do not accurately capture a reason for non-completion of treatment, describe in summary the reason treatment was not completed	
If Not on DOT Explain:	
Number of Recommended Doses:	Number of Doses Taken:
Section 4: Contact Investigation Results	
Genotype: □ Yes □ No	If Yes, Cluster: Indicate PCR type (usually begins with the letter G)
Number of Contacts Identified: Total number of contacts identified	Number of Contacts Evaluated: Total number of contacts that received appropriate screening (window/post window testing) including CXR, sputum collection for AFB testing if appropriate.
Number of Documented Prior Positives: Total number of contacts providing documentation reflecting previously positive TST or IGRA result	
Number of Contacts Infected without TB Disease: Total number of contacts that upon evaluation were asymptomatic, IGRA/TST-positive with a normal CXR	
Number of Contacts Identified as AFB Smear Positive: Total number of contacts that upon evaluation for possible TB disease including collection of sputum for acid fast bacilli testing was found to be smear positive	
Number of Contacts Identified with TB Disease: Total number of contacts that upon evaluation for TB disease including collection of sputum for acid fast bacilli testing was found to be positive for *Mycobacterium tuberculosis*	
Number of Contacts Eligible for Treatment of Latent TB Infection: Indicate the total number of contacts that upon evaluation was diagnosed with latent TB infection	
Number of Contacts that Started Treatment for LTBI: Total number of contacts that were started on treatment for LTBI Recent Documented Conversions: _____ the total number of contacts identified as converting from a negative TST/IGRA result to a positive TST/IGRA result within two (2) years of testing with IGRA/TST and started treatment for LTBI. Children ≤ 5 Years:_____ total number of children whose age at the time of the contact investigation was five (5) years of age or under, and upon evaluation were found to be infected with TB and started treatment for LTBI Known HIV+ Status: _____ total number of contacts with a documented HIV(+) status that were found to be infected with TB and started treatment for LTBI	
Number of Contacts Currently on Treatment for LTBI: Total number of contacts that at the time of the cohort presentation were still on treatment for latent TB infection	
Number of Contacts that Completed Treatment for LTBI: Total number of contacts that before or at the time of the cohort presentation successfully completed treatment for latent TB infection Recent Documented Conversions: _____ total number of contacts identified as converting from a negative TST/IGRA result to a positive TST/IGRA result within two (2) years and completed treatment for latent TB infection before or at the time of the cohort presentation Children ≤ 5 Years:_____ total number of contacts at or below the age of five (5) that completed treatment for latent TB infection before or at the time of the cohort presentation Known HIV+ Status: _____ total number of contacts with a documented HIV(+) status that completed treatment for latent TB infection before or at the time of the cohort presentation	
Number of Contacts that did not complete treatment for LTBI due to: Enter a number in the appropriate space to identify reasons contacts did not successfully complete treatment for latent TB infection	
_____Still on Treatment	_____Adverse Reactions _____Died
_____Moved	_____Refused _____Lost

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Questions

Thank you!