

Cohort Review



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Objectives



- **Define the cohort review approach**
- **Plan how to adapt and implement the cohort review method in your program area**

Definition



- Cohort review is a systematic review of patients with tuberculosis (TB) disease and their contacts.
- It has proven to be a very useful tool for
 - ensuring accountability
 - educating staff about protocols and goals
 - improving case management and prevention

Cohort Review Method



- While it can take many forms, the key points of this method are as follows:
 - TB control staff at the local level meet to review the treatment outcomes of every patient listed in a chronological patient register.
 - A “cohort” is a group of TB cases counted over a specific period of time, usually 3 months. The cases are reviewed approximately 6–9 months after they are counted, many of the patients have completed treatment or are nearing the end of treatment.

Information Reported



- Details regarding the management and outcomes of TB cases are reviewed in a group setting with the following information presented on each case by the case manager
 - Patient's clinical status
 - Patient's treatment outcome
 - Adequacy of the medication regimen
 - Treatment adherence or completion
 - Results of contact investigation
 - Percentage of patients who did, or are likely to, complete treatment.

Case Information Reported



- Patient's initials and case number
- Age
- Sex
- Country of birth
- HIV status
- Smear and culture results
- Chest radiograph (CXR) results
- Drug susceptibility results
- Status of treatment (completed therapy, currently taking TB medications, lost, died, moved, or case reported at death)

Case Information Reported



- **Directly observed therapy status**
- **Results of the source case investigation, if the patient is a child**
- **Number of contacts identified**
- **Number of contacts evaluated**
- **Number of contacts infected, but without disease**
- **Number of contacts infected and having disease**
- **Number of contacts started on treatment for latent TB infection (LTBI)**
- **Number of contacts completing treatment for LTBI**

Benefits



- **Increasing staff accountability for patient outcomes**
- **Improving TB case management and the identification of contacts**
- **Motivating staff**
- **Revealing program strengths and weaknesses**
- **Indicating staff training and education needs**

Program Objectives



- **Actual CDC National Objectives for 2015**

- For patients with newly diagnosed TB for whom 12 months or less of treatment is indicated, increase the proportion of patients who complete treatment within 12 months to 93.0%.
- Increase the proportion of TB patients with positive acid-fast bacillus sputum-smear results who have contacts elicited to 100.0%.
- Increase the proportion of TB cases with positive or negative HIV test result reported to 88.7%.
- Increase the proportion of TB patients with positive sputum culture results who have documented conversion to sputum culture-negative within 60 days of treatment initiation to 61.5%.

Program Objectives



- **Examples of Local Objectives**

- Health department staff will interview at least 90% of persons with TB disease within 3 business days of case notification.
- At least 90% of contact investigations will be completed within 90 days.
- At least 90% of TB cases will be treated by DOT.

Roles

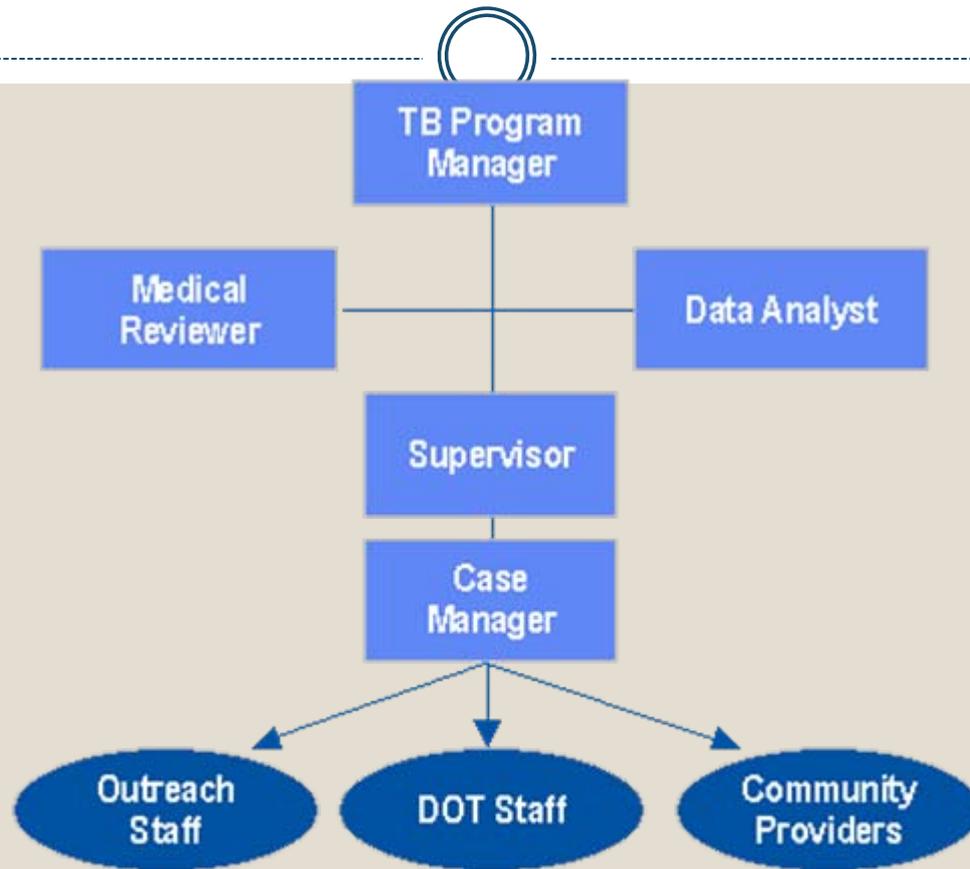


Roles in a TB Program



- TB program manager
 - Medical reviewer
 - Epidemiologist/Data analyst
 - Case manager
- Note: In some health departments, one staff member may have more than one role.

Sample Organizational Chart



-  TB Control Cohort Review Team Members
-  TB Control Staff and Community Providers

TB Program Manager



- **Preparation for a cohort review**
 - Demonstrate commitment to the cohort review process.
 - Ensure staff at all levels understand the reasons for undertaking cohort reviews.
 - Ensure staff at all levels have the knowledge and skills needed to perform the tasks required.
- **Cohort review presentation**
 - Listen to all case presentations.
 - Ask questions of clarification to ensure that all aspects of case management adhere to department of health policies and procedures.
 - Use teachable moments to illustrate important lessons in effective TB control.
- **Follow-up after cohort review**
 - Ensure that medical management and other issues are addressed.
 - Ensure that ongoing, follow-up staff education incorporates program strengths and weaknesses.

Medical Reviewer (1)



- **Preparation for a cohort review**
 - Demonstrate commitment to the cohort review process.
 - Ensure staff at all levels understand the reasons for undertaking cohort reviews.
- **Cohort review presentation**
 - Listen carefully to all case presentations and review available support documents (e.g., printouts from TB registry, charts, and medical records).
 - Ask questions of clarification to make sure policies and procedures were followed and the outcome is satisfactory.
 - Use teachable moments to illustrate important lessons in effective TB control.

Medical Reviewer (2)



- **Cohort review presentation**

- Ensure that all aspects of case management adhere to department of health policies and procedures. This includes ensuring that
 - ✦ – Activities are completed in a timely manner
 - ✦ – Data are complete (e.g., date of birth, entry to US, HIV status)
 - ✦ – Drug regimen is appropriate (e.g., probe for explanations for nonstandard regimens)
 - ✦ – Susceptibility results are obtained, drug regimen adjusted if necessary
 - ✦ – Sputum conversion and completion of treatment are documented
 - ✦ – Contact investigation activities and outcomes are assessed

- **Follow-up after cohort review**

- Ensure that medical management issues are addressed.
- Ensure that ongoing, follow-up staff education incorporates program strengths and weaknesses.

Epidemiologist (1)



- **Preparation for a cohort review**
 - Prepare lists of cases to be reviewed ahead of time: preliminary cohort list 6 months before cohort review, final cohort list 2 months before cohort review.
 - Distribute the lists to case managers and supervisors so they can be prepared to present these cases.
 - Enter relevant information on each case and contact on the cohort summary sheet.
 - Prepare a summary of the current cohort to present at the review session.
 - Calculate the outcomes of previous cohort patients who were likely to complete and contacts who were still on treatment for LTBI.

Epidemiologist (2)



- **Cohort review presentation**

- Present summary of the current cohort of cases.
- Record data on treatment outcomes and other missing information, while the case managers present each case. Note any issues for clarification.
- Tabulate or calculate the treatment outcomes for cases and contacts; present this at the end of the cohort review session.

- **Follow-up after cohort review**

- Write a report of the cohort review outcomes and distribute it to everyone who has a need to know.

Case Manager (1)



- **Preparation for a cohort review**

- Follow all protocols for **case management** to ensure that patients adhere to treatment, comply with medical visits, and complete treatment.
- Follow all protocols for **contact investigation** to ensure that contacts are identified and evaluated, and that they complete treatment for LTBI, if appropriate.
- Communicate periodically with clinic and outreach workers to ensure everything is proceeding without problems; troubleshoot problems.
- Participate in case review meetings with your supervisor and case conference meetings with your TB control team as these are scheduled.
- Ensure a complete job had been done (e.g., all loose ends are tied up, all details are considered, and you have information to answer any questions).
- Prepare a concise presentation of the case according to a standard format.
- Participate in a mock cohort review session to practice your presentation and become accustomed to handling questions that might arise (optional).

Case Manager (2)



- **Cohort review presentation**

- When the TB program manager calls one of your cases, speak loudly and clearly as you deliver your concise presentation.
- Answer questions from the TB program manager, medical reviewer, data analyst, or other TB team members.
- Ask any questions you may have about patient care issues.
- Ask your fellow caseworkers and supervisor to provide any information relevant to your case presentation if necessary.

- **Follow-up after cohort review**

- Follow up to obtain any missing information or clarify details that were noted during the cohort review.
- Update TB registry information as needed.
- Meet with your supervisor to discuss what went well and what could be improved for the next cohort review in 3 months.
- Continue case management if patient has not completed treatment; continue contact investigation activities until contacts who should start or complete LTBI treatment have done so.

Supervisor (1)



- **Preparation for a cohort review**
 - Supervise and assist your **case management** and **contact investigation** staff in following protocols.
 - Hold one-on-one case review meetings with each staff member.
 - Hold periodic case conference meetings with your entire team.
 - Troubleshoot problems with staff.
 - Make sure staff prepare a concise presentation of the case according to a standard format.
 - Hold a mock cohort review session for staff to practice presentation skills. Ask them the kinds of questions that might arise in a real cohort review.
- **Cohort review presentation**
 - Let staff members speak for themselves.
 - Only add something if more detail or confirmation of the approach or activities is required.

Supervisor (2)



- **Follow-up after cohort review**

- Follow up to ensure staff obtain missing information, clarify details, and update TB registry information, as noted during the cohort review.
- Meet with staff as soon as possible to discuss what went well and what could be improved for the next cohort review in 3 months.

Timeline



Timeline



- A “cohort” is a group of TB patients who are being managed over a specific period of time, usually 3 months
- TB cases are reviewed approximately 6–9 months after initial case reporting
 - **after** most patients with TB disease have had time to complete treatment
 - **after** most contacts have been identified, evaluated, and started on treatment for latent TB infection (LTBI), if indicated.
- A review at 6–9 months allows the TB control team to evaluate the adequacy of treatment and correct any problem areas while there is still time for the patient to complete treatment within 365 days.

Cohort Review Timeline

1 ST Quarter Months 1–3	2 ND Quarter Months 4–6	3 RD Quarter Months 7–9	4 TH Quarter Months 10–12	Next Year 1 ST Quarter Months 1–3
TB cases counted Treatment started Contact investigation initiated	Ongoing treatment of patients with TB disease Contacts evaluated and started on treatment, as necessary	Ongoing treatment of patients with TB disease Contacts evaluated and started on treatment, as necessary	TB disease treatment completed Infected contacts continue on treatment for LTBI	Contacts identified in previous year's 1st quarter complete treatment
Cohort review process begins, ongoing case management, case review meetings, cohort review practice session			Cohort Review Session Begin to follow up on suggestions from cohort review	Treatment completion rate presented for contacts of cases from previous 1st quarter -Follow up from cohort review session

Essential Elements



Cohort Review Process

Preparation

Presentation

Follow-up

Preparation (1)



- **Ensuring that TB program staff know TB program objectives**
 - Delineate national, state, and local objectives for your program
 - Communicate these objectives to all TB program staff
- **Using a comprehensive case management system**
 - Ensure that case management protocols are clearly written, comprehensive, and practical for staff to implement

Preparation (2)



- **Use a reliable TB registry (MDSS)**
 - Specify data elements that need to be collected to evaluate program objectives
 - Ensure that staff update registry information regularly
 - Use the registry to generate cohort lists for TB control team members
- **Carefully preparing cases for presentation**
 - Use periodic case reviews to ensure that case and contact information needed for the cohort review is collected
 - Consider adding practice sessions to hone case presentation skills
 - Implement a standard form and presentation format to ensure consistent, concise, and complete presentations

Presentation



- **Presenting each case in detail to the TB control team**
 - Allow team members sufficient time to analyze and evaluate TB cases and contact investigations
- **Providing on-the-spot feedback to staff, troubleshooting, and aggregate reporting**
 - Allow time for troubleshooting of case management issues
 - Develop a standard format for aggregate reporting of data

Follow-up



- **Following up on noted problems**
 - Team members use information gathered at cohort review to follow up on cases and contact investigations, address staff training issues, and solve programmatic problems

Tailoring the Cohort Review Process



- **Establish political and managerial commitment**
 - Communication with staff and management
 - ✦ Benefits
 - ✦ Assistance available
- **Modify the elements of cohort review to fit your program area's needs**
 - Preparation
 - Presentation
 - Follow-up

References



- **Understanding the TB Cohort Review Process: Instruction Guide (2006) from <http://www.cdc.gov/tb/publications/guidestoolkits/cohort/default.htm>**
- ***TB Fact Sheet: WA Cohort Review: A Glance at Washington's Tuberculosis Cohort Review (2011) from <http://www.doh.wa.gov/cfh/tb/publications/CohortReview.pdf>***