

## COHORT REVIEW

---

### Table of Contents

	Page
EFFECTIVE DATE.....	2
POLICY .....	2
BACKGROUND .....	2
OBJECTIVE .....	2
ELEMENTS OF THE PROTOCOL.....	2
1.0 Performance Standards for Contact Investigation and Case Management.....	2
2.0 Procedures for the Cohort Review .....	3
3.0 Roles and Responsibilities .....	4
4.0 Post Cohort Review .....	5
APPENDICES .....	8
1.0 MD/Cohort Coordinator Two Month Review .....	8
2.0 Final List of Cases .....	8
3.0 List of "Likely to Complete" Cases .....	9
4.0 List of Contacts to Cases.....	9
5.0 Cohort Presentation Form I.....	10
6.0 Cohort Presentation Form II .....	12
7.0 Cohort Data Collection Form.....	13
8.0 Cohort Review Summary.....	15
9.0 Cohort Tracking Issues Spreadsheet.....	19
10.0 Cohort Issue Coding List .....	20

## COHORT REVIEW

---

**EFFECTIVE DATE:** 3/1/2003, revised 11/1/2004

### **POLICY**

1. The Bureau of Tuberculosis Control (BTBC) director or his or her designee will conduct a systematic review of all cases counted by the New York City Department of Health, BTBC during a given quarter of the year or "cohort."
2. Quarterly meetings will be scheduled for each network of the BTBC chest centers and field offices approximately five months after the close of each quarter.
3. Follow-up issues will be distributed and addressed by key staff in all units of the BTBC.

### **BACKGROUND**

The tuberculosis case rate in New York City increased throughout the 1980s, and peaked at 52.0 per 100,000 in 1992. At that time, multiple efforts to control the epidemic included: increasing support from public health officials, hospitals and university teaching hospitals; obtaining more funds from federal, state, and local governments; and upgrading laboratories and health codes to ensure rapid and accurate results. The BTBC worked to implement DOT as the standard of care, revised the New York City Health Code to detain persistently non-adherent patients, and developed the Cohort Review process as a quality assurance tool for better case management.

### **OBJECTIVES**

1. Ensure comprehensive case management of all TB patients in NYC.
2. Demonstrate effective supervision and teamwork.
3. Uphold case managers' accountability for all TB cases.
4. Improve the timeliness of appropriate patient management interventions.
5. Maintain reliability of the TB registry as a data/information source.
6. Provide an immediate analysis of outcomes, which are measured against previous cohorts and other networks.
7. Track progress toward meeting local and national targets.
8. Identify, track, and follow up on important issues relating to patients' case management.
9. Motivate staff by showcasing their accomplishments and challenging them to exceed or maintain their previous achievements.
10. Serve as a training needs assessment.

### **ELEMENTS OF THE PROTOCOL**

#### **1.0 Performance Standards for Contact Investigation and Case Management**

- 1.1 National objectives:
  - 1.1.1  $\geq 90\%$  of newly diagnosed patients will complete treatment within 365 days
  - 1.1.2  $\geq 90\%$  of cases appropriate for contact investigation will have contacts identified
  - 1.1.3  $\geq 95\%$  of contacts to sputum AFB-smear positive cases will be evaluated for infection and disease
  - 1.1.4  $\geq 85\%$  of infected contacts who are started on treatment for latent TB

infection will complete therapy

- 1.2 NYC DOHMH-BTBC objectives:
  - 1.2.1  $\geq 50\%$  of cases presented in cohort complete treatment at the time of cohort, excluding MDR cases
  - 1.2.2  $\geq 70\%$  of patients eligible for DOT ever on DOT
  - 1.2.3  $\geq 95\%$  of all smear positive cases are interviewed within 3 days of assignment
  - 1.2.4  $\geq 95\%$  of all other cases are interviewed within 5 days of assignment
  - 1.2.5  $\geq 95\%$  of all issues which arose at the previous cohort are followed up and addressed

## **2.0 Procedures for the Cohort Review**

- 2.1 An annual schedule for the Cohort Reviews is prepared and distributed by the Bureau director's office.
- 2.2 Monthly, BTBC's Network Management Unit (NMU), will generate a report entitled "MD/Cohort Coordinator Two Month Review" (see Appendix I). This report lists all cases counted in the previous two months. In addition to ongoing case management as per protocol from the day the case is assigned, the NMU staff review these cases to ensure the appropriateness of treatment regimens, timeliness of contact investigations and to identify and resolve any problematic treatment issues.
- 2.3 Approximately one to two months before the first scheduled Cohort Review (three to four months after the close of the cohort quarter), the Cohort epidemiologist will run four programs through the TB registry in Mainframe SAS and distribute the following documents to all network managers and appropriate supervising staff:
  - 2.3.1 Final list of cases for the current cohort by network (see Appendix II). Cases are assigned to networks based on the last medical provider.
  - 2.3.2 List of "likely to complete" cases from a previous Cohort Review quarter to be reported on during this cohort (see Appendix III).
  - 2.3.3 List of contacts to cases from a previous Cohort Review quarter (see Appendix IV).
  - 2.3.4 Preliminary list of cases for the next Cohort Review.
- 2.4 The patient care managers for each clinic and the field-based unit (FBU) field service managers for each network will review the final list and ensure that all cases followed by their network are included. If any case has moved and is currently being treated by a different network, the network staff must contact the Cohort epidemiologist as well as all appropriate network staff to decide which network will be presenting the case.
- 2.5 The primary case manager will present the cases and is expected to have a thorough knowledge of each case, as well as be able to respond to any question that the Cohort reviewer might ask regarding their cases.
  - 2.5.1 Cases will be prepared and presented using the Cohort Presentation Forms for pulmonary (see Appendix V) and extrapulmonary/clinical confirmed cases (see Appendix VI).

- 2.5.2 Community-based unit (CBU) staff will be responsible for responding to any inquiries regarding contact investigation and RTS efforts that have been conducted.
- 2.5.3 In the absence of the primary case manager, another case manager or supervisor will be designated to present the case. However, staff are generally discouraged from taking leave during the scheduled days of the Cohort Reviews.
- 2.6 Prior to the Cohort Review, the network staff will decide the order in which the cases are to be presented, and will generate complete files for all of the cases. Each file will include printouts of all panels from the TB registry, any drugograms, 2 and 4 month review forms, epidemiologist notes, Epi-1 and Epi-2 reports if an expanded contact investigation was conducted, registry printouts of secondary or source cases if any, and any other important information, for the Cohort reviewer to review during Cohort Reviews.
- 2.7 Network staff will make the arrangements to reserve a conference room, as well as to provide a video projector and a laptop computer to access the TB registry during Cohort Reviews.
- 2.8 The following staff are expected to attend each Cohort Review:
  - 2.8.1 **The Executive Office** – The Bureau director, Cohort epidemiologist. In the event that the Bureau director cannot attend, the director of Medical Affairs presides over the Cohort Review. In the event that the Cohort epidemiologist cannot be present to collect the data, there is a designated backup for the Cohort epidemiologist, assigned by the Epidemiology Unit.
  - 2.8.2 **The Medical Affairs Office** –The director of Medical Affairs, the deputy director of Medical Affairs, and the MDR coordinator.
  - 2.8.3 **The Network**– The medical consultant, physician(s)-in-charge (PIC), network directors, NMU epidemiologist, field service managers, patient care managers, primary case managers and their supervisors
  - 2.8.4 **The Epidemiology Unit** – The network epidemiologist
- 2.9 The Bureau director will review all aspects of each case, focusing on the treatment issues and contact investigations. This evaluation is intended to create a forum for discussion. The Bureau director may use particular cases to illustrate important points concerning tuberculosis epidemiology, treatment and control. All staff familiar with the case in question will be expected to provide useful feedback concerning the management of the case.

### 3.0 Roles and Responsibilities

- 3.1 At the start of the Cohort Review, the network epidemiologist will provide a descriptive analysis of the cases presented, which includes, but is not limited to, a comparison of this cohort's cases with the cases from the same cohort last year, characteristics of patients such as country of birth, HIV status and clinical aspects of TB, as well as reviewing all expanded contact investigations and cluster investigations for the cohort.
- 3.2 Immediately following the network epidemiologist's presentation, the case managers will present each case in a clear and concise manner, using cohort presentation forms, as the Bureau director calls the name of the case. The Cohort

epidemiologist will record the following information for each patient in a database: site of disease; smear and culture status for all pulmonary cases; chest radiograph results; date patient assigned to a case manager and date patient interviewed by case manager; disposition; directly observed therapy (DOT); employment status; and contact investigation outcomes, namely the number of contacts identified, evaluated, tested, on LTBI treatment and disposition. In addition, any recommendations or comments made by the Bureau director are recorded. (See Appendix VII).

- 3.3 During the Cohort Review, the NMU epidemiologists will systematically document issues that arise during cohort. (See Section 4.2 for Tracking Cohort Issues). This new protocol was designed not only to resolve the case management issues that arise during the Cohort Review, but also to evaluate the efficacy of the Cohort Review process. It is the responsibility of the network staff to also keep their own record of the issues, which they can immediately follow up on as well.
- 3.4 Immediately following the Cohort Review case presentations, the Cohort epidemiologist will calculate and give a preliminary presentation on the network's completion data at the time of cohort and including the "likely to complete" cases, DOT percentages, timeliness of interview averages, contact index, treatment of latent TB infection percentages and a brief review of the cohort issues which were tracked during the prior cohort. Preliminary data will be subsequently evaluated with respect to citywide and CDC targets as well as compared to data from prior cohorts and other networks (See Section 1.0 for Performance Standards for Contact Investigation and Case Management).
- 3.5 Completion data on "likely to complete" cases and open contacts on LTBI treatment presented at prior Cohort Reviews are also reviewed and the revised completion rates are presented to the network staff.

#### 4.0 Post Cohort Review

##### 4.1 The Cohort Summary

- 4.1.1 Data collected during the Cohort Review will be finalized and any subsequent follow-up to case information will be obtained by the Cohort epidemiologist and entered into the Excel spreadsheet. Final calculations are tabulated and contact information will be further analyzed using SPSS.
- 4.1.2 Within two weeks following the final network Cohort Review, the Cohort epidemiologist will distribute a citywide summary of all of the networks' results from the Cohort Review to key staff, including the Bureau director, network director, medical consultants, physician(s)-in-charge (PIC), network nursing supervisor, and other network supervisors (see Appendix VIII).
- 4.1.3 The data for the summary will be added and finalized as the cohort year progresses, so that at the end of the cohort year, the summary will provide information from all four cohort quarters for the entire year.

##### 4.2 Tracking Cohort Issues: An Evaluation of Cohort Review Efficacy

- 4.2.1 During the Cohort Review, the NMU epidemiologist will document issues that arise during cohort in a pre-fabricated spreadsheet (See Appendix IX).
- 4.2.2 Network staff should also be tracking items identified during cohort

- reviews for immediate follow-up.
- 4.2.3 Upon completion of each Cohort Review, NMU epidemiologist will categorize each issue with an issue code (See Appendix X).
  - 4.2.4 Within three days of the Cohort Review, the NMU epidemiologist will disseminate the spreadsheet of all issues that require follow-up to the appropriate network field service managers, patient care managers or other network staff.
  - 4.2.5 Supervising network staff will be responsible for delegating follow-up issues to the appropriate case managers.
  - 4.2.6 Network staff will be allotted 1 month from date spreadsheet is sent to address issues identified during cohort.
  - 4.2.7 The NMU epidemiologist will send out reminders to their respective networks one week before network cohort responses are due to ensure timely receipt of issues addressed.
  - 4.2.8 In the event that networks do not meet response deadlines, NMU epidemiologist will send alert responses to field service managers and patient care managers on the day after the due date to ensure that issues are addressed promptly.
  - 4.2.9 Any issues that are unresolved at this point should have a thorough and clear explanation for why it is not resolved.
  - 4.2.10 The Network Management Unit will continue to ask for follow up on a monthly basis for any unresolved issues.
  - 4.2.11 Prior to the next quarterly cohort meeting, a final total of the resolved issues will be calculated and the Cohort epidemiologist will present the following results from the cohort at the next Cohort Review:
    - 4.2.11.1 The top 3-5 issues identified for each network.
    - 4.2.11.2 The percentage of issues that were resolved. (The goal is to have 95% of issues resolved by the next cohort).

Approved by: (1) <u>Sonal Munsiff, MD</u> <u>12/28/04</u>  (2) <u>Shama Ahuja</u> <u>12/28/04</u> <div style="display: flex; justify-content: space-around; width: 100%;"> <span>Print Name</span> <span>Date</span> </div>
--

Reviewed:	Date: (mm-yy)	10/26/04	11/01/04	11/16/04	
	Name/Signature	Sonal Munsiff	Sonal Munsiff	Chi-Chi Udeagu	
Revised:	Date: (mm-yy)	10/28/04			
	Signature:				

APPENDIX I: MD/COHORT COORDINATOR TWO-MONTH REVIEW

DATE COUNTED=REGION=A CURRENT\*MED SUPERVISOR=000

OBS	LASTNM	CRS#	RXSTART	LAST SITE VISIT	CAVI DX	SMR TARY	CUL POS	INH POS	RIF RES	ON DOT LAST 2 VIS	DOTDATE	ST	DISPO	CON ID	CON EVAL	CON INF	CON MED
-----	--------	------	---------	-----------------	---------	----------	---------	---------	---------	-------------------	---------	----	-------	--------	----------	---------	---------

1	CASE A		01/13/00	02/15/00	N	2	Y	N	N	Y	02/15/00	N	OTHER DR RES	21	20	9	5
---	--------	--	----------	----------	---	---	---	---	---	---	----------	---	--------------	----	----	---	---

DATE COUNTED=REGION=A CURRENT\*MED SUPERVISOR=000

OBS	LASTNM	CRS#	RXSTART	LAST SITE VISIT	CAVI DX	SMR TARY	CUL POS	INH POS	RIF RES	ON DOT LAST 2 VIS	DOTDATE	ST	DISPO	CON ID	CON EVAL	CON INF	CON MED
-----	--------	------	---------	-----------------	---------	----------	---------	---------	---------	-------------------	---------	----	-------	--------	----------	---------	---------

1	CASE B		01/21/02	02/16/02	Y	2	Y	Y	N	Y	06/15/00	N	INH RES	5	1	3	1
---	--------	--	----------	----------	---	---	---	---	---	---	----------	---	---------	---	---	---	---

DATE COUNTED=REGION=A CURRENT\*MED SUPERVISOR=000

OBS	LASTNM	CRS#	RXSTART	LAST SITE VISIT	CAVI DX	SMR TARY	CUL POS	INH POS	RIF RES	ON DOT LAST 2 VIS	DOTDATE	ST	DISPO	CON ID	CON EVAL	CON INF	CON MED
-----	--------	------	---------	-----------------	---------	----------	---------	---------	---------	-------------------	---------	----	-------	--------	----------	---------	---------

1	CASE C		01/13/00	02/15/00	N	2	Y	N	N	Y	02/15/00	N	OTHER DR RES	21	10	6	3
---	--------	--	----------	----------	---	---	---	---	---	---	----------	---	--------------	----	----	---	---

DATE COUNTED=REGION=A CURRENT\*MED SUPERVISOR=000

OBS	LASTNM	CRS#	RXSTART	LAST SITE VISIT	CAVI DX	SMR TARY	CUL POS	INH POS	RIF RES	ON DOT LAST 2 VIS	DOTDATE	ST	DISPO	CON ID	CON EVAL	CON INF	CON MED
-----	--------	------	---------	-----------------	---------	----------	---------	---------	---------	-------------------	---------	----	-------	--------	----------	---------	---------

1	CASE D		01/13/00	02/15/00	Y	1	Y	N	N	N		N	OTHER DR RES	6	6	2	0
---	--------	--	----------	----------	---	---	---	---	---	---	--	---	--------------	---	---	---	---

APPENDIX II: FINAL LIST OF CASES FOR THE COHORT

REPORT 18: CASE INFORMATION BY REGION OF CURRENT MED SUPV  
 FOR 'ALL FACILITIES'

COUNTED FROM '01/01/04' THROUGH '03/31/04'

----- REG= NCODE=. CURRENT MED SUPV= -----

Obs	CASE NUMBER	LAST NAME	FIRST INITIAL	AGE	DATE OF LAST VISIT	REFILL	SMEAR	CONTID	CONTEX	CONTRX	SPECIAL THERAPY	XRAY RESULT	CAVITARY	CONTIN STATUS
1	A0000000	CASE A	I	87	08/10/04	1	P	2	2	0	T	A	C	SENS OR UNKNOWN

----- REG= NCODE=50 CURRENT MED SUPV= -----

Obs	CASE NUMBER	LAST NAME	FIRST INITIAL	AGE	DATE OF LAST VISIT	REFILL	SMEAR	CONTID	CONTEX	CONTRX	SPECIAL THERAPY	XRAY RESULT	CAVITARY	CONTIN STATUS
2	A0000000	CASE B	F	55	08/16/04	1	P	23	18	0	P	A	N	SENS OR UNKNOWN

----- REG= NCODE=50 CURRENT MED SUPV= -----

Obs	CASE NUMBER	LAST NAME	FIRST INITIAL	AGE	DATE OF LAST VISIT	REFILL	SMEAR	CONTID	CONTEX	CONTRX	SPECIAL THERAPY	XRAY RESULT	CAVITARY	CONTIN STATUS
3	A0000000	CASE C	P	82	01/12/04	1		2	0	0	U	N		DELINQUENT
4	A0000000	CASE D	G	54	02/20/04	1	P	12	12	0	P	A	N	DIED

----- REG= NCODE=51 CURRENT MED SUPV= -----

Obs	CASE NUMBER	LAST NAME	FIRST INITIAL	AGE	DATE OF LAST VISIT	REFILL	SMEAR	CONTID	CONTEX	CONTRX	SPECIAL THERAPY	XRAY RESULT	CAVITARY	CONTIN STATUS
5	A0000000	CASE E	M	35	08/19/04	1		.	.	.	N	N		SENS OR UNKNOWN
6	A0000000	CASE F	M	68	07/22/04	1		2	0	0	R	N		SENS OR UNKNOWN

**APPENDIX III: LIST OF “LIKELY TO COMPLETE” CASES**

**NETWORK LIST OF LIKELY**  
**X QUARTER X YEAR**

CRS	Name	Direct Care/Field Site	Started	Last Possible Medical Visit	365 days	Disp	Dispdate	Deathdate	Stopdte	Lastmed	Trt Len	<=365	Comments	
case A	field		6/30/2003	5/30/2004	6/29/2004	1	4/1/2004	.	4/29/2004	3/30/2004	304	304		
case B	field		7/18/2003	6/17/2004	7/17/2004	.	.	.	6/4/2003	6/4/2003				
case C	field		7/24/2003	6/23/2004	7/23/2004	1	7/23/2004	.	7/23/2004	7/23/2004	365	365		
case D	clinic		8/4/2003	7/4/2004	8/3/2004	.	.	.	9/16/2003	9/16/2003	43	43		
case E	field		7/30/2003	6/29/2004	7/29/2004	1	4/21/2004	.	4/13/2004	4/13/2004	258	258		
case F	clinic		8/14/2003	7/14/2004	8/13/2004	1	7/7/2004	.	7/7/2004	7/7/2004	328	328		
case G	clinic		8/17/2003	7/17/2004	8/16/2004	.	.	.	.	.				
case H	clinic		9/16/2003	8/16/2004	9/15/2004	.	.	.	8/25/2003	8/25/2003				
case I	field		9/3/2003	8/3/2004	9/2/2004	1	7/1/2004	.	6/22/2004	6/22/2004	293	293		
case J	field		9/2/2003	8/2/2004	9/1/2004	1	6/29/2004	.	6/21/2004	6/21/2004	293	293		
case K	field		9/5/2003	8/5/2004	9/4/2004	1	9/3/2004	.	8/29/2004	7/30/2004	359	359		
case L	clinic		9/8/2003	8/8/2004	9/7/2004	1	8/30/2004	.	6/25/2004	5/26/2004	291	291		
case M	field		9/26/2003	8/26/2004	9/25/2004	.	.	.	6/1/2004	6/1/2004	249	249		
case N	clinic		9/18/2003	8/18/2004	9/17/2004	.	.	.	8/26/2004	8/26/2004	343	343		
case O	clinic		9/26/2003	8/26/2004	9/25/2004	.	.	.	.	.				
			15				8				Average	284	284	
						53.33%				Median	293	293		
									Total	11	11			
									73.33%	73.33%				

**APPENDIX IV: LIST OF CONTACTS TO CASES**

1 REPORT # 54 1

CONTACTS TO X QUARTER X YEAR CASES BY INDEX CASE PROVIDER

----- REG= CURR= SOURCE=A0000000 LAST NAME FIRST NAME REPORTING FACILITY -----

Obs	CASE #	Z LAST NAME	Z FIRST NAME	DOB	Z RELATION	A I/R RES	Z CURR FACIL CODE	Z CURRENT FACIL		
1	Z0311152	CONTACT	A	05/11/1972	.	N	116			
2	Z0311177	CONTACT	B	12/03/1967	.	N				
3	Z0311175	CONTACT	C	03/29/1950	.	N				
4	Z0311146	CONTACT	D	02/05/2000	.	N				
5	Z0311153	CONTACT	E	03/23/1972	.	N				
6	Z0311150	CONTACT	F	09/15/2002	.	N				
7	Z0311154	CONTACT	G	03/11/1994	.	N				
8	Z0314388	CONTACT	H	10/13/1999	.	N				
9	Z0311151	CONTACT	I	03/07/1995	.	N				
10	Z0311179	CONTACT	J	04/09/1967	.	N	013			
11	Z0311183	CONTACT	K	12/20/1994	.	N	346			
Obs	DATE TST1	Z PPD RES1	Z ON DRUGS	Z DISPOSITION	DATE TST2	Z PPD RES2	Z DTEXRAYF	Z AGE	Z COB	Z YOY
1	06/23/2000	P	Y	B	.	.	08/23/2003	.	MX	91
2	07/30/2003	N	N	NOT INFECTED	.	.	.	.	MX	91
3	.	.	N	LOST	.	.	.	.	MX	03
4	06/11/2003	N	N	NOT INFECTED	.	.	.	.	US	
5	07/30/2003	N	N	NOT INFECTED	.	.	.	.	MX	91
6	06/13/2003	N	N	NOT INFECTED	.	.	06/13/2003	.	US	
7	07/30/2003	N	N	NOT INFECTED	.	.	.	.	US	
8	06/05/2003	N	N	NOT INFECTED	.	.	.	.	US	
9	06/05/2003	N	N	NOT INFECTED	.	.	.	.	US	
10	07/30/2003	P	Y	.	.	.	11/03/2003	.	MX	88
11	07/30/2003	P	Y	.	.	.	08/18/2003	.	US	

APPENDIX V: COHORT PRESENTATION FORM

**COHORT PRESENTATION I:  
 PULMONARY OR LARYNGEAL TB CASE**

1. Name: \_\_\_\_\_ CRS # \_\_\_\_\_

Noncount [No further report necessary]

\_\_\_\_\_ year-old \_\_\_\_\_ {male/female}, born in \_\_\_\_\_ {country}

Special therapy \_\_\_\_\_ {+ / - /refused/unknown}  Protease inhibitor or NNRTI (name)<sup>1</sup>: \_\_\_\_\_

<p><b>2a. Sputum Smear Positive,<sup>2</sup> Pulmonary,<sup>3</sup></b></p> <p>a) <input type="checkbox"/> Pulmonary<sup>3</sup> TB  <input type="checkbox"/> (Both) Pulmonary &amp; Extrapulmonary                  _____ {Site}</p> <p>b) Sputum smear positive: _____ plus<sup>5</sup></p> <p>c) Culture _____ [+ , - , or not done]</p> <p>d) If culture positive, Source: _____</p> <p>e) Date assigned: _____</p> <p>f) Date interviewed: _____                  If &gt;3 days for interview - state reason<sup>6</sup>:                  _____                  _____</p>	<p><b>2b. Sputum Smear Negative,                  Sputum Culture Positive</b></p> <p>a) <input type="checkbox"/> Pulmonary<sup>3</sup> TB  <input type="checkbox"/> (Both) Pulmonary &amp; Extrapulmonary                  _____ {Site}</p> <p>b) Sputum smear negative</p> <p>c) Sputum culture positive</p> <p>d) Date assigned: _____</p> <p>e) Date interviewed: _____                  If &gt;5 days for interview - state reason<sup>6</sup>:                  _____                  _____</p>	<p><b>2c. Other:</b> (Pediatric; other respiratory culture-positive; cavitary, culture negative)<sup>4</sup></p> <p>a) <input type="checkbox"/> Pulmonary<sup>3</sup> TB  <input type="checkbox"/> (Both) Pulmonary &amp; Extrapulmonary                  _____ {Site}</p> <p>b) Smear status: _____ [- , or not done]</p> <p>c) Culture _____ [+ or -]                  if +, source of + culture: _____</p> <p>d) Date assigned: _____</p> <p>e) Date interviewed: _____                  If &gt;5 days for interview - state reason<sup>6</sup>:                  _____                  _____</p>
Drug Susceptibility Results: <input type="checkbox"/> Pansensitive <input type="checkbox"/> <b>MDR</b> <input type="checkbox"/> <b>Rifampin resistant</b> <input type="checkbox"/> Other resistance ( _____ )		
Chest Radiograph Results: <input type="checkbox"/> Cavitary <sup>7</sup> <input type="checkbox"/> (Abnormal) Non-Cavitary <input type="checkbox"/> Normal CXR		

**3a. Treatment Outcome at time of cohort**

<input type="checkbox"/> Completed therapy	<input type="checkbox"/> Taking TB medications. <sup>8</sup> if yes, has completed _____ months of tx. <sup>9</sup>
<input type="checkbox"/> Likely to complete therapy by (date) _____	
<input type="checkbox"/> Did not complete treatment and no longer in care (reason): <input type="checkbox"/> Refused <input type="checkbox"/> Lost <input type="checkbox"/> Died <input type="checkbox"/> Reported at death <input type="checkbox"/> Moved <sup>10</sup> Where: _____ Date of Interstate referral: _____	

3b.  On DOT: \_\_\_\_\_ total number of months on DOT; \_\_\_\_\_ months on DOT with ≥ 80% compliance

If NO DOT, why not: \_\_\_\_\_  Pharmacy checks<sup>11</sup> done

4. If case is a child 18 years old or under:  Source identified?<sup>12</sup> Name: \_\_\_\_\_ CRS#: \_\_\_\_\_

5a.  Employed Type of work: \_\_\_\_\_  
 ECI associated with this case ECI site: \_\_\_\_\_

**5b. Contacts**

\_\_\_\_\_ Identified<sup>13</sup>

\_\_\_\_\_ Inappropriate for TST (Died prior to end of Window Period)<sup>14</sup>

\_\_\_\_\_ Appropriate for TST<sup>15</sup>

\_\_\_\_\_ Evaluated<sup>16</sup>

\_\_\_\_\_ Prior cases (adequately treated)

\_\_\_\_\_ Prior positive

\_\_\_\_\_ Infected with disease: Name: \_\_\_\_\_ CRS#: \_\_\_\_\_

\_\_\_\_\_ Infected with suspected disease<sup>17</sup>: Name: \_\_\_\_\_ CRS#: \_\_\_\_\_

\_\_\_\_\_ Infected (New TST+), no disease [confirmed by chest x-ray]

\_\_\_\_\_ Appropriate for treatment of latent TB infection (LTBI)<sup>18</sup>

\_\_\_\_\_ Started treatment for LTBI<sup>19</sup>

\_\_\_\_\_ Completed treatment for LTBI

\_\_\_\_\_ Current to care

\_\_\_\_\_ Discontinued treatment for LTBI due to:

\_\_\_\_\_ Adverse reactions to medications

\_\_\_\_\_ Died

\_\_\_\_\_ Moved<sup>10</sup>

\_\_\_\_\_ Refused to continue treatment for LTBI

\_\_\_\_\_ Lost to follow-up

**6. Discussion<sup>20</sup>**

## **Notes, Definitions and Special Cases**

1. If patient is taking a protease inhibitor or non-nucleoside reverse transcriptase inhibitors (NNRTIs), specify the name of the medication.
2. Report positive sputum smears regardless of the culture's result. Suspicious smears are considered to be positive.
3. A disease site in the respiratory system including the airways [sputum and specimens from tissue codes: 18-25, 27 & 28].
4. Use this section to present the following cases that **do not meet the 2A or 2B criteria**: culture negative, cavitory, respiratory culture positive, no sputum smear done; and pediatric cases (cases under 18 years old at TB diagnosis). For culture negative cases without a positive sputum smear or cavitory chest x-ray, use Cohort Presentation II: Clinically Confirmed or Extrapulmonary.
5. Highest grade of smear, if known.
6. Use this space to document reasons for delayed interview, for example, a change in patient's priority level.
7. Chest x-rays are reported as cavitory, non-cavitory, or normal. Do not report x-ray dates or the results of follow-up x-rays.
8. Do not list medications. The Director has the printout of drug regimens. However, be prepared to discuss if case is MDR, rifampin resistant, taking a protease inhibitor/NNRTI, or if regimen is unusual.
9. If adherence for any period has been below 80%, state so and be prepared to explain.
10. A case can only be closed as moved if an interstate had been done.
11. For patients on self-administered treatment, present a review of pharmacy records to assess treatment adherence.
12. Be prepared to present the source case and associated contact investigation, including whether this child was listed as a contact in the contact investigation for the source case.
13. "Contacts identified" include all true contacts with legitimate names and addresses.
14. Contacts "inappropriate for evaluation" will be subtracted from the contacts identified to determine the number appropriate for evaluation.
15. Contacts appropriate for evaluation include all legitimate contacts identified who were not counted as "died prior to testing." "Evaluation" consists of tuberculin skin testing and chest radiograph unless there is a documented prior positive TST. A contact is given one or two TSTs (Post-window period testing is only required for contacts who initially test TST-negative).
16. Report only the number evaluated. Do not report the number of contacts who were UTL, who moved more than 60 days after being identified and were not evaluated, or who refused. These explanations may come up in discussion, but are not part of the standard format.
17. All suspects must be reclassified to either "infected with disease" or "infected without disease" within four months of the initiation of treatment.
18. Contacts "appropriate for treatment of latent TB infection" include all TST+ contacts recommended for medical follow-up for whom treatment is medically indicated. Persons identified during a contact investigation who need treatment, but were TST negative or prior TST positive will be excluded from this number. Be prepared to explain.
19. Report the number who started treatment for LTBI. Do not report the number of people who did **not** start treatment for LTBI; however, be prepared to explain. Do not report people who received window prophylactic treatment and were found not to have had latent TB infection. Provide updated information on those contacts who started treatment for LTBI.
20. It is important to be familiar with:
  - Patient's adherence history, latest DOT status, dates of regulatory requests/outcomes, and current regulatory status;
  - Patient's occupation and residence settings, particularly if patient is homeless;
  - Where contact with others occurred and how often;
  - When contacts were evaluated in relation to patient's last positive smear;
  - If source case investigation was conducted and results, including relationship of this to any other known cases;
  - Evaluations of sex/needle-sharing partners of HIV positive patients; also, are there any HIV positive contacts;
  - Status of treatment for LTBI when appropriate, including window prophylaxis;
  - If and when expanded contact testing occurred and results of investigation.

APPENDIX VI: COHORT PRESENTATION FORM II

**COHORT PRESENTATION II:  
CLINICALLY CONFIRMED or EXTRAPULMONARY TB CASE**

1. Name: \_\_\_\_\_ CRS # \_\_\_\_\_

Noncount [No further report necessary]

\_\_\_\_\_ year-old \_\_\_\_\_ {male/female}, born in \_\_\_\_\_ {country}

Special therapy \_\_\_\_\_ {+ / - /refused/unknown}  Protease inhibitor or NNRTI(name)<sup>1</sup>: \_\_\_\_\_

Date Assigned: \_\_\_\_\_

Date Interviewed: \_\_\_\_\_ If > 5 days for interview - state reason: \_\_\_\_\_

Clinically confirmed, pulmonary, smear negative, culture negative, non-cavitary<sup>2</sup>

Extrapulmonary only [Site of disease: \_\_\_\_\_]

Pansensitive

MDR

Rifampin resistant

Other resistance (\_\_\_\_\_)

Completed therapy

Currently taking TB medications<sup>3</sup>

Has completed \_\_\_\_\_ months of treatment

Likely to complete therapy by (date) \_\_\_\_\_

Did not complete therapy and no longer in care

Reason patient did not complete:  Refused  Lost  Died  Moved<sup>4</sup>  Reported at death

ON DOT: YES or NO (circle):

If YES: \_\_\_\_\_ total number of months on DOT; \_\_\_\_\_ months on DOT with  $\geq 80\%$  compliance

If NO DOT, why not: \_\_\_\_\_

Pharmacy checks<sup>5</sup> done

***Skip contacts.***

***If case is under 18 years old then use COHORT PRESENTATION FORM I.***

**2. Discussion<sup>6</sup>**

**Notes:**

1. If patient is taking a protease inhibitor or non-nucleoside reverse transcriptase inhibitors (NNRTIs), specify the name of the medication.
2. If the patient has pulmonary disease and has either a positive sputum AFB smear or a cavitary chest x-ray then use Cohort Presentation Form I: Pulmonary or Laryngeal TB.
3. Do not list medications. The Director has the printout of drug regimens. However, be prepared to discuss if case is MDR or regimen is unusual.
4. A case can only be closed as moved if an interstate has been done.
5. For patients on self-administered treatment, present a review of pharmacy records to assess treatment adherence.
6. It is important to be familiar with:
  - Adherence history;
  - Patient's occupation and residence settings, particularly if patient is homeless;

Results from any contact investigation that may have been conducted before culture results were available, particularly if any HIV positive contacts were identified.



**CLINICAL PRACTICES MANUAL**  
**SECTION: MANAGEMENT OF PATIENTS WITH SUSPECTED**  
**OR CONFIRMED TB DISEASE**

**NYC DOHMH - BTBC**  
**No. 1.06**

DATE: 10/05/04  
 COHORT: network

pg# 1

OBS #	CRS#	NAME	CONTACTS																				
			# identified	died noTST	appr. for evaluation	evaluated	prev. case	prev. TST+	TST tested	# disease	# Suspected	# infected	TLTBI not indicated	TLTBI indicated	started appr. TLTBI	# ref strt TLTBI	# complete	# still on TLTBI	# adv rxns	# Died	# Moved	# ref cont TLTBI	# Lost
		HOSPITAL A																					
1	A1	CASE 1	3		3	3			3			0											
		HOSPITAL B																					
2	A2	CASE2	40	1	39	37		14	23			0											
		HOSPITAL C																					
3	A3	CASE3																					
		HOSPITAL D																					
4	A4	CASE4	2		2	1		1	0														
5	A5	CASE5																					
6	A6	CASE6																					
		HOSPITAL E																					
7	A7	CASE7	4		4	3			3			2		2	1	1		1					
		HOSPITAL F																					
8	A8	CASE8																					
9	A9	CASE9	3		3	1			1			0											
10	A10	CASE10																					
		HOSPITAL G																					
11	A11	CASE11																					
		HOSPITAL H																					
12	A12	CASE12																					
			12	52	1	51	45	0	15	30	0	0	2	0	2	1	1	0	1	0	0	0	0

**APPENDIX VIII: COHORT REVIEW SUMMARY**

**CITYWIDE SUMMARY - FICTITIOUS DATA**

***Year End Totals - PRELIMINARY COMPLETION DATA***

	Cases Started	Cases Completing at the time of cohort <sup>1</sup>	Including Likelys, best possible completion rate <sup>2</sup>	Excluding MDR/RIF cases <sup>3</sup>	Moved	Died <sup>4</sup>	Non-count	Default	Failure <sup>5</sup>
<i>All Regions</i>	1118	684	220	21	12	100	5	33	14
<i>Index of Completion</i> <sup>6</sup>		67.8%	87.8%	89.6%		8.8%		3.0%	

**SUMMARY BY REGION**

***X Quarter of X Year - PRELIMINARY COMPLETION DATA***

Region	Cases Started	Cases Completing at the time of cohort <sup>1</sup>	Including Likelys, best possible completion rate <sup>2</sup>	Excluding MDR/RIF cases <sup>3</sup>	Moved	Died <sup>4</sup>	Non-count	Default
Region 1 (date of cohort)	35	14	12	0	2	2	1	2
		43.8%	81.3%	81.3%		5.9%		5.9%
Region 2 (date of cohort)	70	42	15	3	0	7	1	2
		70.0%	90.5%	95.0%		10.0%		2.9%
Region 3 (date of cohort)	102	63	15	3	0	11	0	3
		70.8%	84.8%	87.6%		10.7%		2.9%
Region 4 (date of cohort)	73	45	18	3	0	4	0	1
		67.2%	90.0%	94.0%		5.4%		1.4%
<b><i>All Regions</i></b>	<b>280</b>	<b>164</b>	<b>60</b>	<b>9</b>	<b>2</b>	<b>24</b>	<b>2</b>	<b>8</b>
<b><i>Index of Completion</i></b> <sup>6</sup>		<b>66.1%</b>	<b>87.2%</b>	<b>90.3%</b>		<b>8.5%</b>		<b>2.9%</b>

***X Quarter of X Year - PRELIMINARY COMPLETION DATA***

Region	Cases Started	Cases Completing at the time of cohort <sup>1</sup>	Including Likelys, best possible completion rate <sup>2</sup>	Excluding MDR/RIF cases <sup>3</sup>	Moved	Died <sup>4</sup>	Non-count	Default
Region 1 (date of cohort)	55	28	15	1	1	3	2	3
		57.1%	86.0%	87.8%		10.7%		5.7%
Region 2 (date of cohort)	71	31	27	1	1	4	1	2
		47.7%	87.9%	89.2%		8.3%		2.9%
Region 3 (date of cohort)	79	52	15	1	0	3	0	4
		69.3%	88.2%	89.3%		3.8%		5.1%
Region 4 (date of cohort)	76	49	18	0	1	4	0	0
		68.1%	93.1%	93.1%		5.3%		0.0%
<b><i>All Regions</i></b>	<b>281</b>	<b>160</b>	<b>75</b>	<b>3</b>	<b>3</b>	<b>14</b>	<b>3</b>	<b>9</b>
<b><i>Index of Completion</i></b> <sup>6</sup>		<b>61.3%</b>	<b>89.0%</b>	<b>90.0%</b>		<b>6.7%</b>		<b>3.2%</b>

1 Index of completion = [(cases completing / (cases started - (died+non-count+MDRs on meds+counted by other))]

2 Index of completion taking into consideration those likely to complete therapy =< 365 days

3 Index of completion taking into consideration those likely to complete therapy by the end of the cohort year when all MDR and RIF- resistant cases are removed from the calculation.

4 Percentages based on total cases counted and also includes those reported at death

5 Cases completing treatment > 365 days

6 Final Completion Index pending review of 'likely to complete' cases from the third and fourth quarters

**SUMMARY BY NETWORK**

***X Quarter of X Year - FINAL COMPLETION DATA***

Region	Cases Started	Cases Completing at the time of cohort <sup>1</sup>	Including Likelys, best possible completion rate <sup>2</sup>	Excluding MDR/RIF cases <sup>3</sup>	Moved	Died <sup>4</sup>	Non-count	Default
Region 1 (date of cohort)	56	36	8	0	1	9	0	2
		73.5%	89.8%	89.8%		15.5%		3.6%
		<b>Final Completion Index</b>		<b>89.6%</b>				
Region 2 (date of cohort)	85	52	12	2	3	7	0	1
		67.5%	81.0%	83.1%		8.1%		1.2%
		<b>Final Completion Index</b>		<b>81.8%</b>				
Region 3 (date of cohort)	92	57	19	2	0	6	0	4
		67.1%	87.4%	89.4%		6.5%		4.3%
		<b>Final Completion Index</b>		<b>87.1%</b>				
Region 4 (date of cohort)	80	52	16	2	1	3	0	2
		69.3%	88.3%	90.7%		3.8%		2.5%
		<b>Final Completion Index</b>		<b>88.0%</b>				
<b>All Regions</b>	<b>313</b>	<b>197</b>	<b>55</b>	<b>6</b>	<b>5</b>	<b>25</b>	<b>0</b>	<b>9</b>
<b>Index of Completion</b>		<b>68.9%</b>	<b>86.3%</b>	<b>88.1%</b>		<b>7.9%</b>		<b>2.9%</b>
		<b>Final Completion Index</b>		<b>86.3%</b>				

***X Quarter of X Year - FINAL COMPLETION DATA***

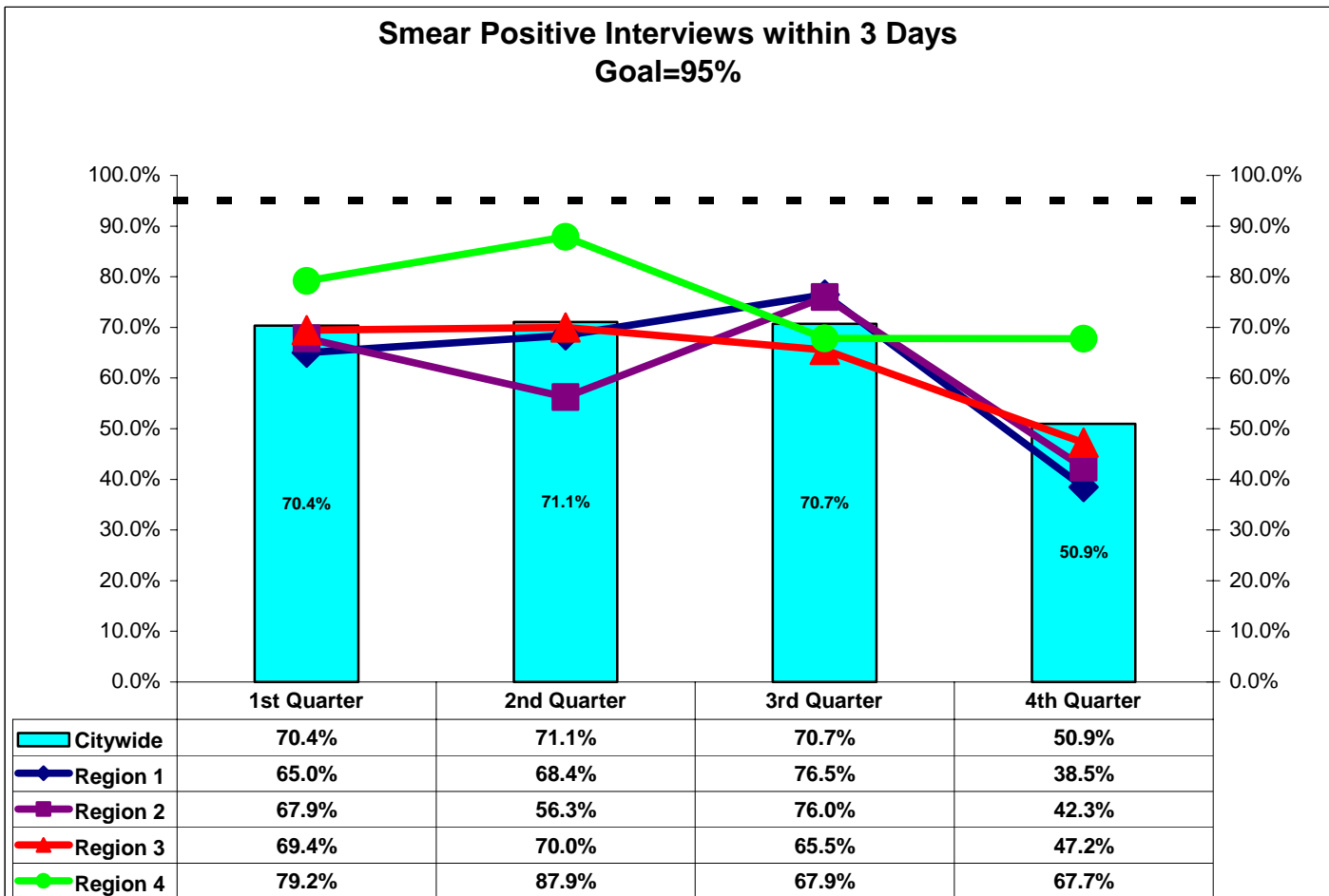
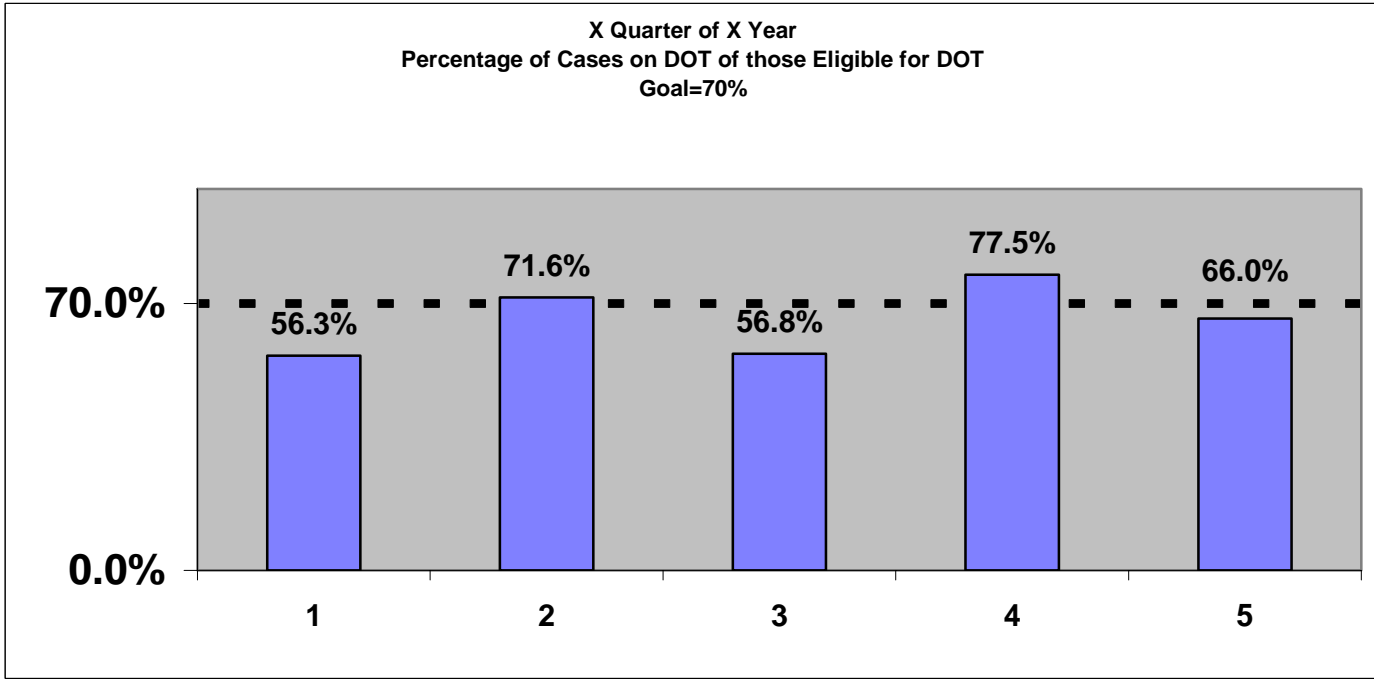
Region	Cases Started	Cases Completing at the time of cohort <sup>1</sup>	Including Likelys, best possible completion rate <sup>2</sup>	Excluding MDR/RIF cases <sup>3</sup>	Moved	Died <sup>4</sup>	Non-count	Default
Region 1 (date of cohort)	36	19	8	0	1	4	0	0
		59.4%	84.4%	84.4%		13.5%		0.0%
		<b>Final Completion Index</b>		<b>75.0%</b>				
Region 2 (date of cohort)	74	46	11	3	0	10	0	2
		75.4%	89.1%	93.4%		14.7%		2.7%
		<b>Final Completion Index</b>		<b>93.4%</b>				
Region 3 (date of cohort)	72	50	8	0	1	6	0	3
		75.8%	87.9%	87.9%		10.8%		4.2%
		<b>Final Completion Index</b>		<b>87.9%</b>				
Region 4 (date of cohort)	62	48	3	0	0	6	0	2
		87.3%	92.7%	92.7%		12.7%		3.3%
		<b>Final Completion Index</b>		<b>90.9%</b>				
<b>All Regions</b>	<b>244</b>	<b>163</b>	<b>30</b>	<b>3</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>7</b>
<b>Index of Completion</b>		<b>76.2%</b>	<b>88.9%</b>	<b>90.2%</b>		<b>12.9%</b>		<b>2.9%</b>
		<b>Final Completion Index</b>		<b>88.3%</b>				

1 Index of completion = [(cases completing / (cases started - (died+non-count+MDRs on meds))]

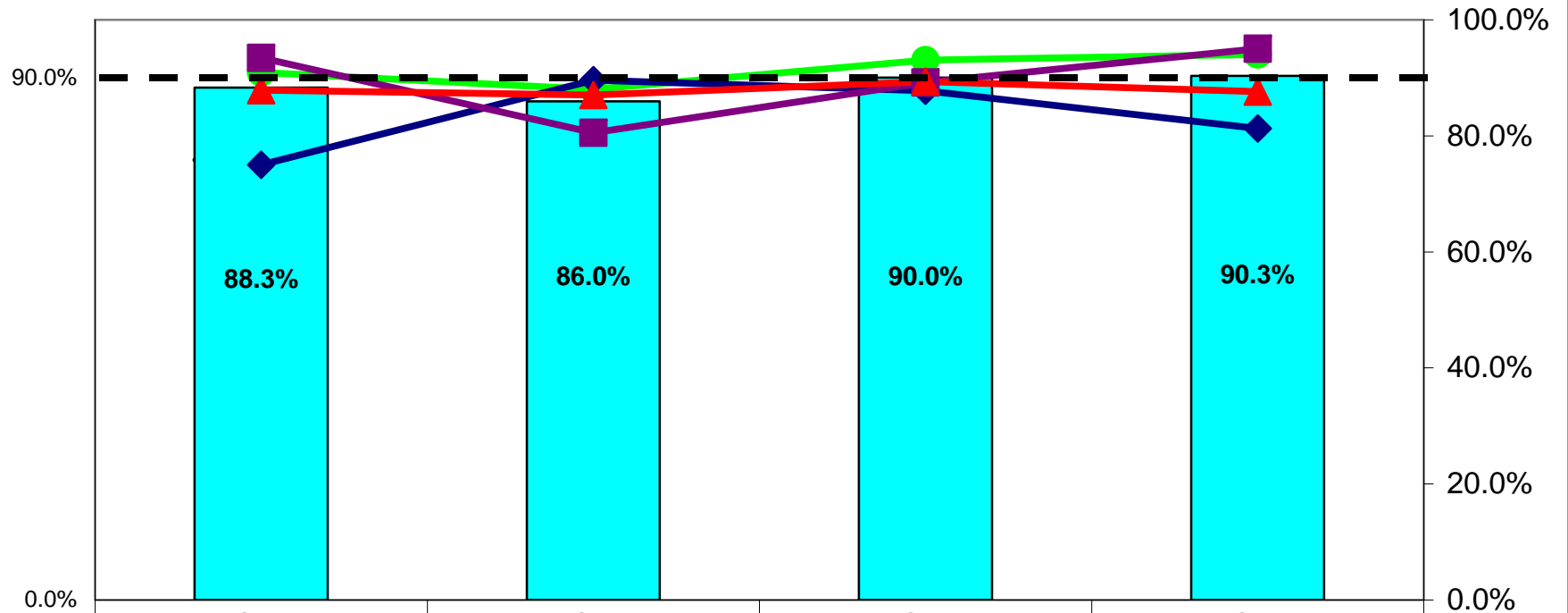
2 Index of completion taking into consideration those likely to complete therapy by the end of the cohort year

3 Index of completion taking into consideration those likely to complete therapy by the end of the cohort year when all MDR and RIF- resistant cases are removed from the calculation.

4 Percentages based on total cases counted and includes those reported at death



## Completion Index Goal=90%



<span style="color: cyan;">■</span> Citywide	88.3%	86.0%	90.0%	90.3%
<span style="color: green;">●</span> Region 4	90.9%	88.0%	93.1%	94.0%
<span style="color: blue;">◆</span> Region 1	75.0%	89.6%	87.8%	81.3%
<span style="color: purple;">■</span> Region 2	93.4%	80.5%	89.2%	95.0%
<span style="color: red;">▲</span> Region 3	87.9%	87.1%	89.3%	87.6%

**CLINICAL PRACTICES MANUAL**  
**SECTION: MANAGEMENT OF PATIENTS WITH SUSPECTED**  
**OR CONFIRMED TB DISEASE**

**NYC DOHMH - BTBC**  
**No. 1.06**

**APPENDIX IX: TRACKING COHORT ISSUES SPREADSHEET**

TO BE PRESENTED AT SECOND QUARTER 2004 COHORT													
AT FIRST QUARTER 2004 COHORT													
Network: (to be filled in) Manhattan Network													
PRECOHORT						DURING COHORT		NETWORK POST-COHORT F/U		NMU POST-COHORT F/U			
Obs #	CRS #	Last Name	First Name	Facility	Case Manager	Issue Code	Notes	What was Done	Who Completed F/U	Completion Status	(Month 1)	(Month 2)	(Month 3)
135						2Av	Information on homeless and tobacco variables are missing on social panel. Update registry.						
136						2A	HIV information on registry is "unknown" but cohort presentation states he was negative. Update HIV status on social Hx panel in registry						
208						-	None						
209						2Aiv, 2Aiii	Spouse contact is not closed. Registry should be updated with correct and verified information. "Relationship" classification should be classified as "ECI" but "close" or "other than close" for contact #008.						
210						2A	Is CXR consistent with TB? Verify and update on registry.						
211						1B, 6A, 2?	Incomplete Tx due to elevated LFT levels. Should be followed up every 3-6 months due to regimen. But case "closed" by MD. Re-educate MD (?). Question whether this is bovis - test mother and specimen.						

**APPENDIX X: COHORT ISSUE CODING LIST**

1. Treatment Issues/Clinical Issues
  - A. Wrong dosage
  - B. Not enough treatment
  - C. Wrong regimen
  - D. Sputum not collected
  - E. Debatable diagnosis of patient: mistake in clinical confirmation, disposition of a non-count
  - F. Intolerant to standard regimen
  - G. LTBI treatment issues
  - H. Other treatment issues
2. Surveillance Issues
  - A. Information on the registry is incorrect, needs to be corrected
  - B. Information on the registry is not available, needs to be updated
  - C. Information needs to be added, specifically when new registry codes are not being utilized
  - D. Clarification of what the registry is reflecting (this may or may not need follow up, may just be an informative issue)
  - E. Problem with the registry/ possible glitch in the registry
  - F. Microbiology or pathology lab issues
  - G. Other surveillance issues
3. Programmatic Issues
  - A. Expanding testing to certain populations
  - B. Expanding DOT programs or increasing DOT enrollment
  - C. Regulatory Affairs issues (either late referrals or cases that need to be referred)
  - D. Other programmatic issues
4. Contact Issues
  - A. CI was not done or was delayed
  - B. Contacts were not tested or fully evaluated
  - C. Contacts were not identified
  - D. Other contact issues
5. Case-Management Issues
  - A. Cases were not interviewed, or there was a delay in interview
  - B. Delay in the assignment of cases
  - C. Interstate issues
  - D. Other case management issues
6. Epidemiology Issues
  - A. ECI was not done or was delayed
  - B. HCW issues, possible exposure at a hospital needing further follow up
  - C. Possible exposure at a congregate setting needing further follow up
  - D. Other epidemiology issues
7. Education and Training Issues
  - A. Additional educational outreach to private providers needed
  - B. Additional educational outreach to DOHMH staff
  - C. Additional educational outreach to patients
  - D. Other education and training issues