TB Nurse Case Management

The Marathon

1

Denise Dodge RN
April 11, 2013

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Objectives

2

- Describe 3 critical nurse case management decision points during TB treatment
- Explain the rational for monitoring bacteriology culture conversion
- List 4 ongoing TB nurse cases management interventions that may improve treatment outcomes
- Explain criteria used for determining treatment completion

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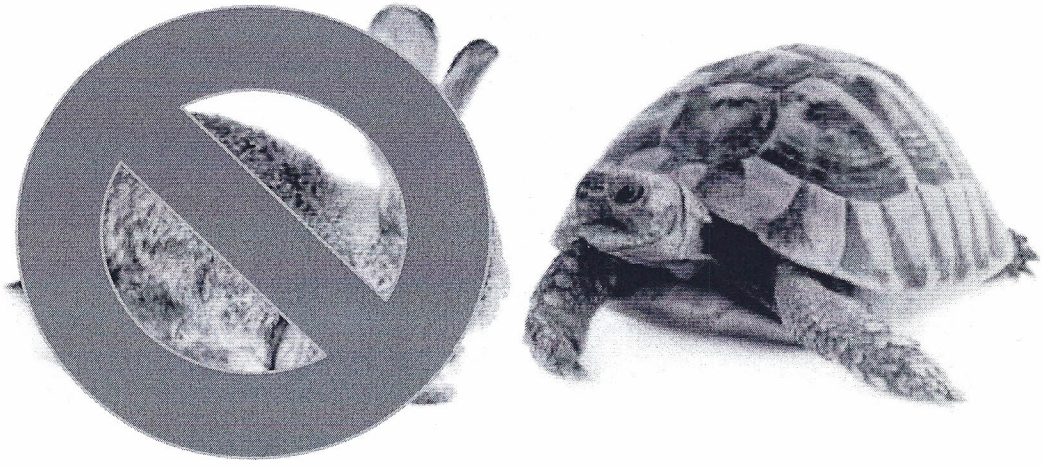
Sprint vs Marathon

3



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Continuation Phase Challenges

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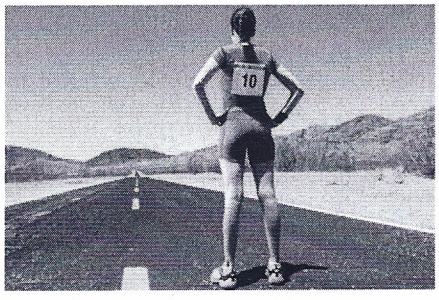
- Monitoring treatment effectiveness
- Determining treatment regimens
- Managing adverse events
- Managing barriers to adherence
- Calculating treatment completion



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Sputum Smear/Culture Conversion

5

Question Answered	Method	
Diagnosis	**3 consecutive sputum upon intake**	**Healthcare worker observed Prefer early morning**
Smear Conversion/ Initial Response to Treatment	**Sputum every 1 to 2 weeks depending on smear results**	**After first negative smear, collect two more within days**
Culture Conversion/ Test of Cure	**Collect a minimum of 3 sputum specimens throughout the month**	**Continue collection until 2 consecutive cultures are negative**
Treatment Failure	**Collect 3 sputum specimens**	**Intervene as needed**
Treatment Length	**Collect 3 sputum between the 55th and 60th day after treatment started**	**Minimum of 3 specimens at least 8 hours apart INDUCE IF NECESSARY!!!**

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Decision Point – 8 weeks/ 60 days

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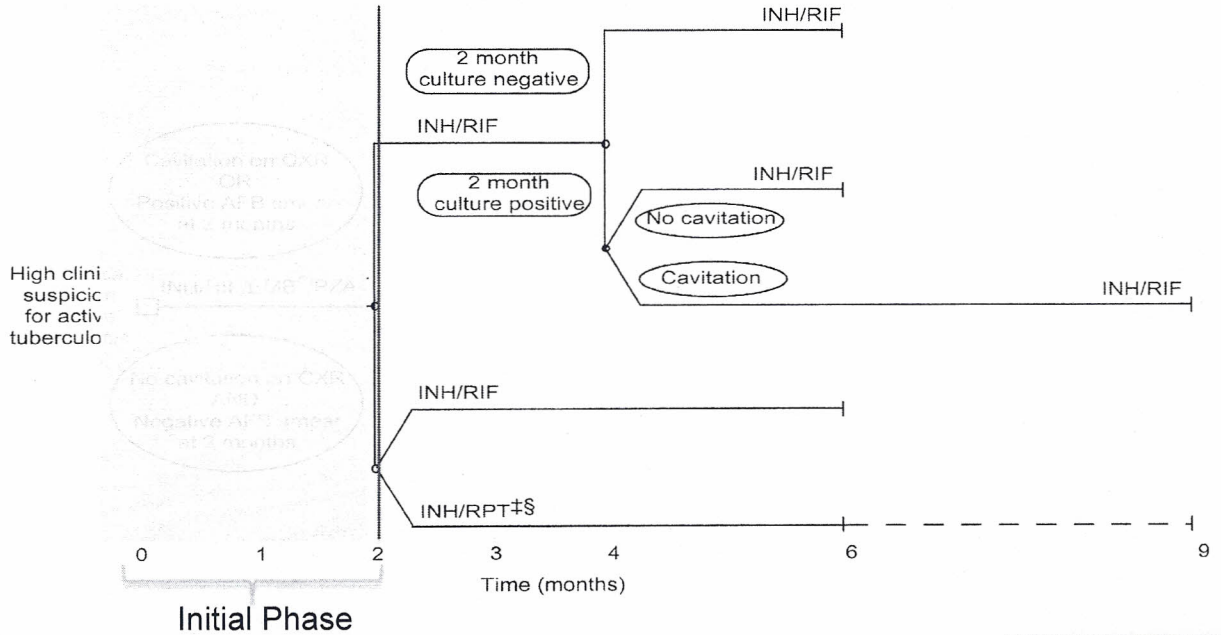

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Sputum Culture Conversion – 60 days!

7

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What should happen **at/by** 8 weeks?

8

- Decide if suspect is a case of TB or not?
  - Culture confirmed, Clinical, Provider
  - Surveillance Team, Bill and Tim
- Plan to look for culture conversion
- Susceptibilities
- Recognize slow response
- Be alert for 'Hit the wall' behavior

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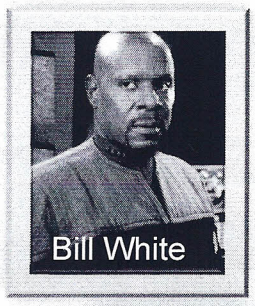
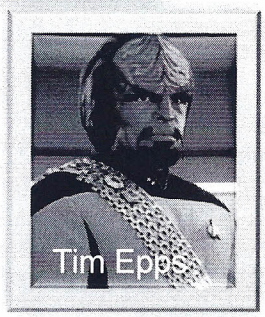
TB or Not TB?...That is the question!

9

- Case Definition criteria
  - Organism ID
    - DNA probe
    - Löwenstein-Jensen media
  - **N**ucleic **A**cid **A**mplification **T**est
    - **M**ycobacterium **D**irect **T**est (DCLS)
    - **P**olymerase **C**hain **R**eaction (Other labs)
  - TST or IGRA result
  - Chest x-ray
  - Clinical evidence





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Importance of culture conversion

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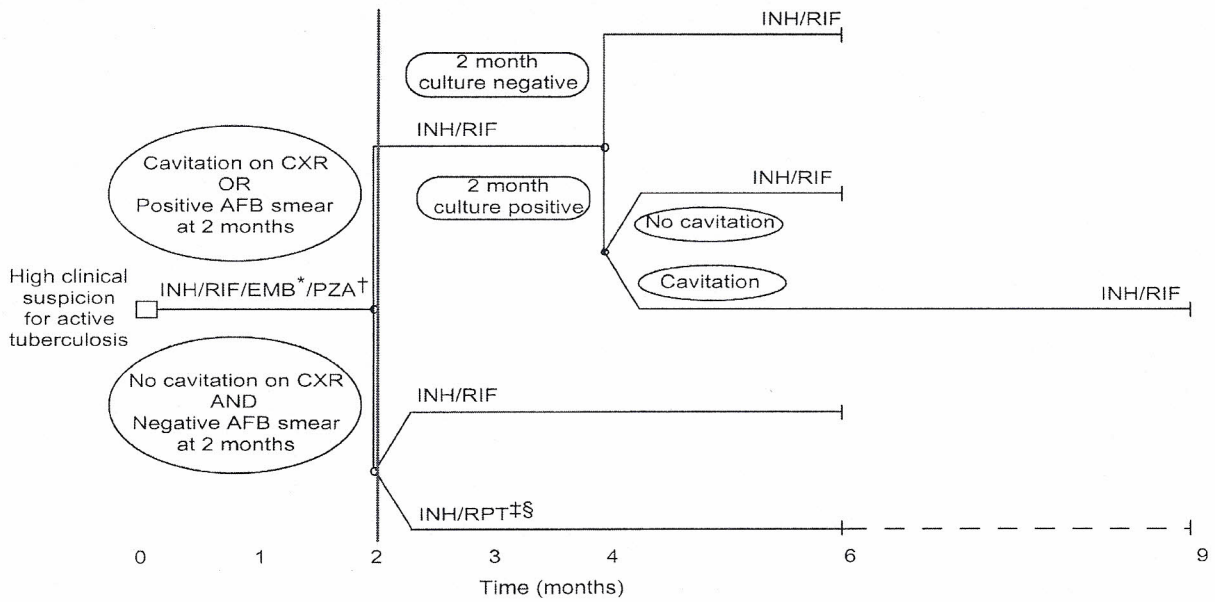

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Importance of culture conversion

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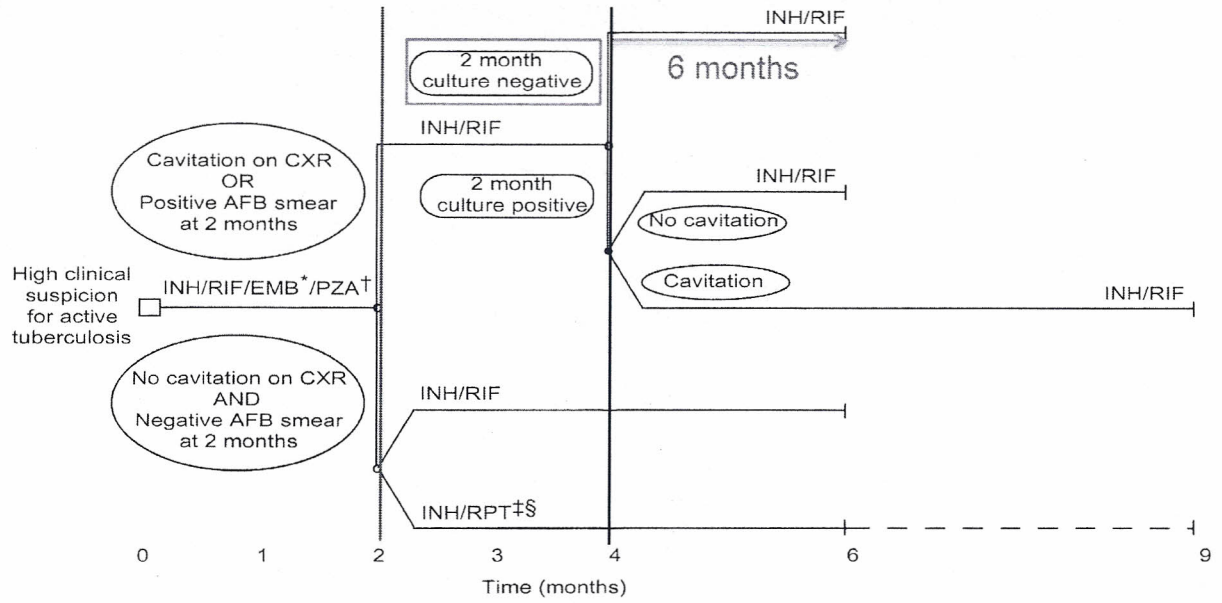

Importance of sputum conversion

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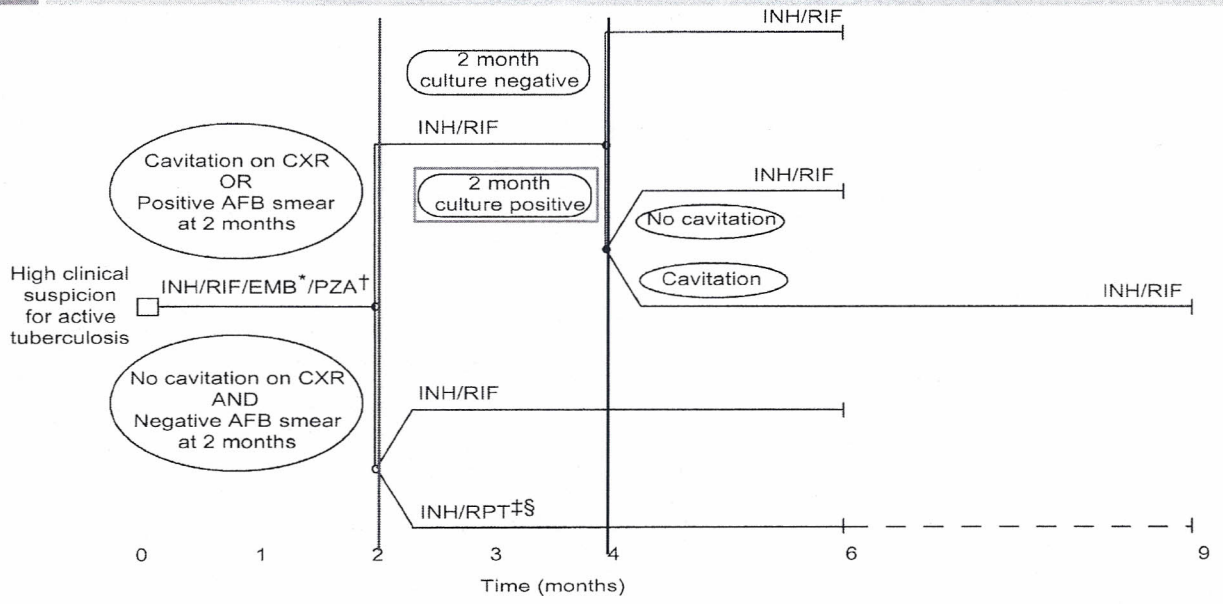

Importance of sputum conversion

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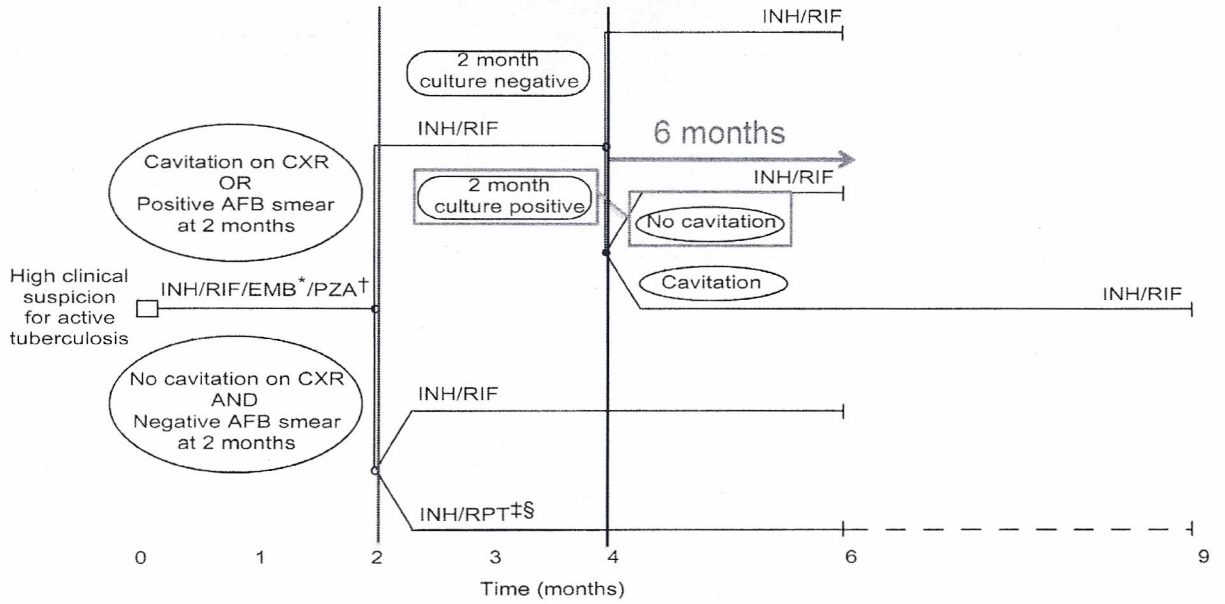

Importance of sputum conversion

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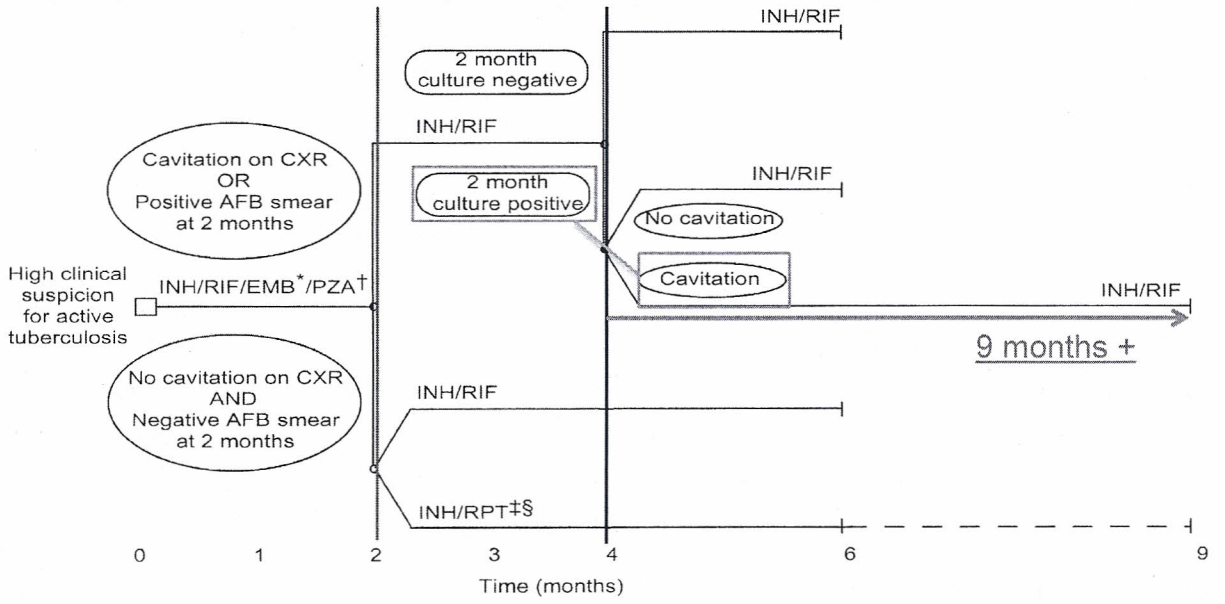

Culture Negative Pulmonary Tuberculosis

Treatment of Tuberculosis, MMWR 2003, p7, fig. 2

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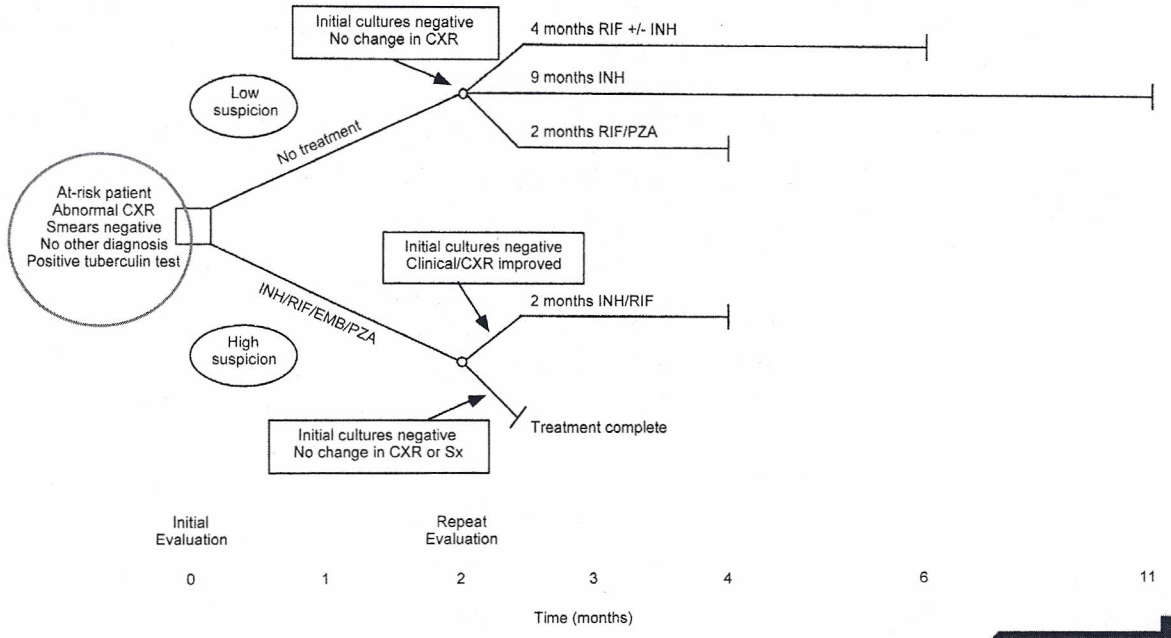

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Treatment of Tuberculosis, MMWR 2003, p7, fig. 2

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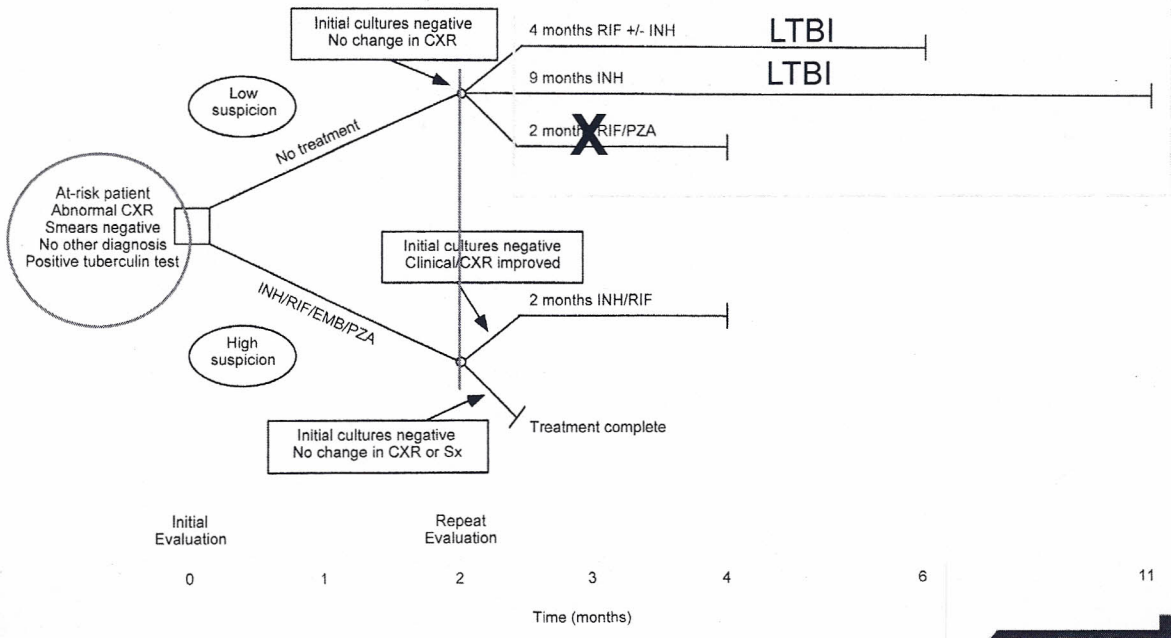

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Treatment of Tuberculosis, MMWR 2003, p7, fig. 2

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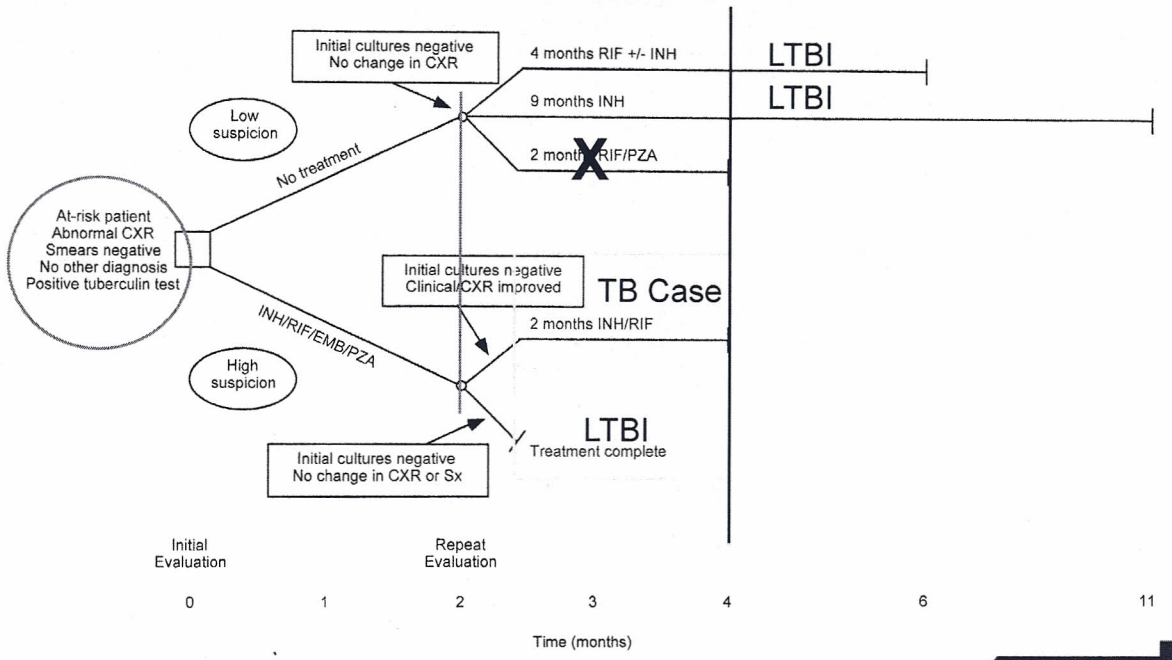

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Summary – Sputum collection

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At least one Health care worker observed

Early morning to improve quality

- Initially - 3 consecutive specimens
- One sample every 2 weeks after initial series of 3
  - May be done in one week if smear not strongly positive
- After first negative smear, collect 2 additional within a few days
  - Repeat in 1 week if any smears are positive
- **Collect 3 specimens between days 55 - 60**
- **Continue collecting monthly until 2 consecutive cultures are negative**

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Susceptibilities

19

- Available 2 – 4 weeks after isolate is identified
  - Should be available 6 – 8 weeks after specimen collection
  - Do not hesitate to call lab
- Helps with determining if treatment is appropriate
- Pan sensitive – Discontinue Ethambutol (with order)
- If resistance is present…

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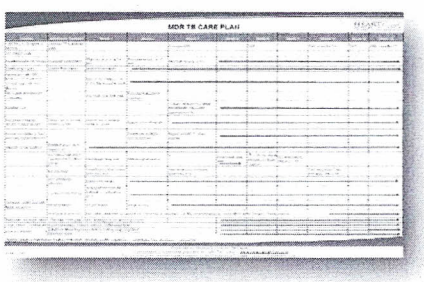
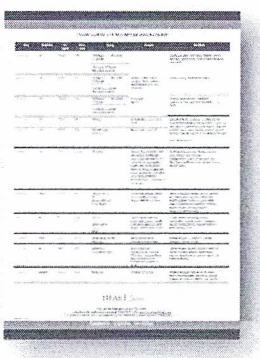
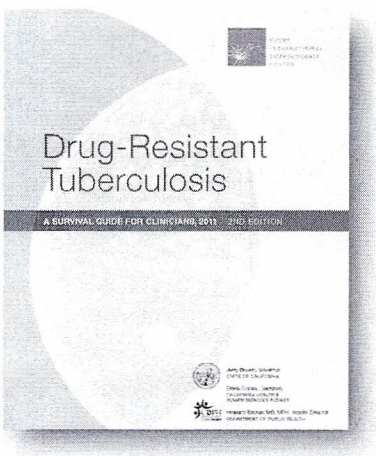
Resources for Managing Drug Resistance

20

- Drug-Resistant Tuberculosis, 2nd Ed.
  Francis j. Curry National TB Center, http://www.currytbcenter.ucsf.edu/
- MDR TB Care Plan
  Characteristics of Second Line Drugs
  Heartland National TB Center
  http://www.heartlandntbc.org/







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Documentation - Bacteriology Flow sheet

21

Keeping it all in order

Virginia Department of Health
Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED							
SPECIMEN TYPE							
SPECIMEN #							
SMEAR RESULT							
MTD/NAA RESULT							
CULTURE RESULT							
NAME OF LAB							

Circle and note date of smear conversion and date of culture conversion.

Date of smear conversion _____
Date of culture conversion _____

DRUG SUSCEPTIBILITY TESTING: *Mycobacterium tuberculosis* cultures and isolates only

Initial Susceptibility Results Date Collected: _____ Culture or Isolate #: _____ Laboratory			Additional Susceptibility Results Date Collected: _____ Culture or Isolate #: _____ Laboratory		
DRUG	SENSITIVE	RESISTANT	DRUG	SENSITIVE	RESISTANT
Isoniazid			Isoniazid		
Rifampin			Rifampin		
Ethambutol			Ethambutol		
Pyrazinamide			Pyrazinamide		

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Documentation - Bacteriology Flow sheet

22

Virginia Department of Health
Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED	2/1/13						
SPECIMEN TYPE	Sputum						
SPECIMEN #							
SMEAR RESULT							
MTD/NAA RESULT							
CULTURE RESULT							
NAME OF LAB	DCLS						

- Date collected:
  - is not the date you picked it up
  - is not the date the report was received
- Always note the source/specimen type
- Where it was sent will help you find it in the future!

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Documentation - Bacteriology Flow sheet

23

Virginia Department of Health
Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED	2/1/13						
SPECIMEN TYPE	Sputum						
SPECIMEN #	12345						
SMEAR RESULT	3+						
MTD/NAA RESULT							
CULTURE RESULT							
NAME OF LAB	DCLS						

First report

- Specimen number: this may be the only way to differentiate between specimens
- Smear positivity is normally reported, don't just record positive unless that is all you have
- Many reports to follow

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Documentation - Bacteriology Flow sheet

24

Virginia Department of Health
Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED	2/1/13						
SPECIMEN TYPE	Sputum						
SPECIMEN #	12345						
SMEAR RESULT	3+						
MTD/NAA RESULT	Positive						
CULTURE RESULT							
NAME OF LAB	DCLS						

Nucleic Acid Amplification

- First specimen only
- Within days of receiving smear result
- This is not a culture but is acceptable for reporting
- Susceptibilities will not be started yet, need isolate (culture)

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Documentation - Bacteriology Flow sheet

25

Virginia Department of Health
Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED	2/1/13						
SPECIMEN TYPE	Sputum						
SPECIMEN #	12345						
SMEAR RESULT	3+						
MTD/NAA RESULT	Positive						
CULTURE RESULT	Mtb						
NAME OF LAB	DCLS						

Culture Results

- Will take 6 – 8 weeks
- AFB + culture may be reported first, without ID
- Several preliminary reports will arrive
- After the culture is reported, the susceptibilities will now begin on first positive *M.tb* specimen

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Documentation - Bacteriology Flow sheet

26

Treatment initiated in hospital 1/20/13

Organize data in chronological order

Towards the end of treatment be sure all final lab results are back

3/16/13 – 3/21/13

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Bacteriology Flow Sheet

Name _____ DOB _____

DATE COLLECTED	2/1/13	2/2/13	2/3/13	2/12/13	2/13/13	2/21/13	3/10/13
SPECIMEN TYPE	Sputum	Sputum	Sputum	Sputum	Sputum	Sputum	Sputum
SPECIMEN #	12345	12346	12351	12411	12434	12577	12901
SMEAR RESULT	3+	1+	2+	neg	2+	1+	(neg)
MTD/NAA RESULT	Positive	----------	----------	----------	----------	----------	----------
CULTURE RESULT	Mtb	Mtb	Mtb	Mtb	Mtb	Mtb	Mtb
NAME OF LAB	DCLS	DCLS	DCLS	DCLS	DCLS	DCLS	DCLS

DATE COLLECTED	3/12/13	3/13/13	3/16/13	3/17/13	3/20/13	3/27/13	4/10/13
SPECIMEN TYPE	Sputum	Sputum	Sputum	Sputum	Sputum	Sputum	Sputum
SPECIMEN #	13326	13346	13416	13427	13469	13701	14746
SMEAR RESULT	neg	neg	neg	neg	neg	neg	neg
CULTURE RESULT	Mtb	Mtb	Mtb	(neg)	neg	neg	
NAME OF LAB	DCLS	DCLS	DCLS	DCLS	DCLS	DCLS	DCLS

DATE COLLECTED	5/10/13						
SPECIMEN TYPE	Sputum						
SPECIMEN #	15399						
SMEAR RESULT	neg						
CULTURE RESULT							
NAME OF LAB	DCLS						

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Documenting Susceptibilities

27

Circle and note date of smear conversion and date of culture conversion.

Date of smear conversion 3/10/13
Date of culture conversion 3/17/13

DRUG SUSCEPTIBILITY TESTING: *Mycobacterium tuberculosis* cultures and isolates only

Initial Susceptibility Results Date Collected: 2/1/13 Culture or Isolate #: 12345 Laboratory			Additional Susceptibility Results Date Collected: ____ Culture or Isolate #: ____ Laboratory		
DRUG	SENSITIVE	RESISTANT	DRUG	SENSITIVE	RESISTANT
Isoniazid	X		Isoniazid		
Rifampin	X		Rifampin		
Ethambutol	X		Ethambutol		
Pyrazinamide	X		Pyrazinamide		

Report results to treating physician within 24 hours of receiving the report

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Slow Response – 4 to 6 weeks of treatment

28

- Definition:
  - **Sputum smear (+) <u>not decreasing</u>**
    - adequate decrease is:
      - 4+ to 2+
      - 3+ to 1+ or,
      - 2+ or 1+ to smear negative
  - **<u>No improvement</u> in TB symptoms**
    - no weight gain
    - no reduction in cough
    - persistent fever, or
    - worsening of chest x-ray if performed

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Slow Response

29

WHY

Adherence	Treatment Regimen	Drug Resistance	Malabsorption
ETOH/Other substances	Wrong meds	Malabsorption	Diabetes
Number of pills	Wrong frequency	Wrong dosage	Cachexia
Side Effects	Wrong dosage	No DOT	HIV
Priorities	Wrong diagnosis	Wrong drug for resistance pattern	Chron's disease
Cultural beliefs	Drug interactions	Wrong Regimen	Gastric Surgery
Drug interaction		Country of origin	Cystic Fibrosis
Forgetful			Food interaction
Willful refusal			
No DOT			

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Serum Drug Levels

30

- Diabetics at 2 weeks automatically
- Others, if treatment failure is apparent
  - Be sure your sputum results are clearly documented
  - Ensure DOT
  - Assess for clinical improvement: weight, temperature, reported improvement, lessened cough, increase energy
  - CXR does not improve as quickly as sputa and clinical status
- Follow VDH Policy
  - Recommendations on report are often different than VDH policy!
  - Must consult with TB physicians for intervention

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31

Adherence Issues

Barriers to Adherence - Patient

32

- Complacency
  - Feels better
  - Reduced fear
  - Want freedom
  - Back to Normal
  - Risky Behaviors
  - Recalcitrant

Address non-adherence promptly

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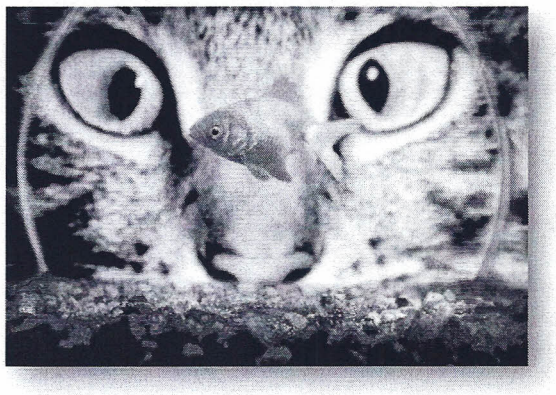
Interventions for Barriers to Adherence

33

- HIP Program
- Mental health referral
- Substance abuse services
- Food pantries
- Meals on Wheels
- Transportation
- Translation services



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Barriers to Care - Organization

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- Missed communication opportunities
- Calm after the storm
- Multiple programs, multiple responsibilities
- Perceived low priority
- Time constraints
- Poor understanding of TB NCM
- Available resources

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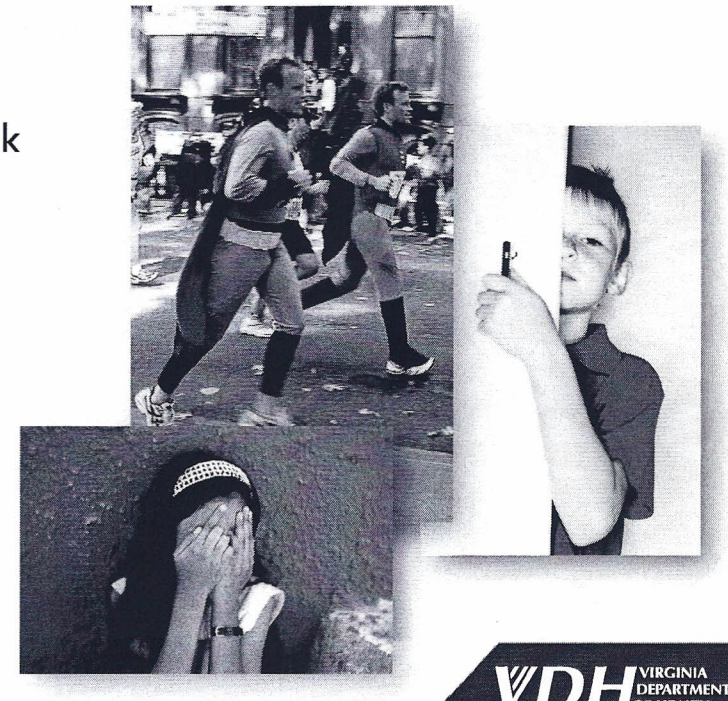
Barriers to Adherence - Contacts

35

- Apathetic
  - Perceived health risk
  - Forgot
  - Fearful
  - Cost



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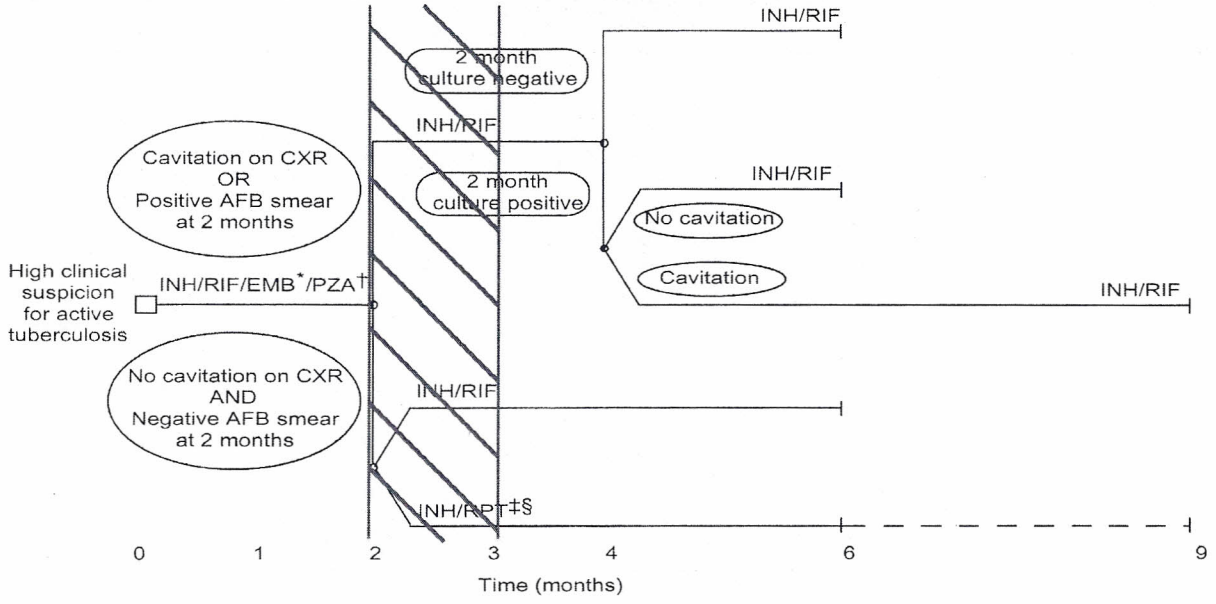
36

Treatment Regimens

Treatment Regimens

37



Treatment Regimens

38

- Continuation phase
  - Susceptibility results
    - Discontinue Ethambutol with order
    - Adjust other drugs as appropriate
    - Rifampin resistance - much longer regimen 12 – 18 months
  - Toxicity/Intolerance = Proxy drug resistance
  - No improvement, NTM?, Sarcoid?, Cancer? = d/c meds
  - PZA and the continuation phase

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Doses of PZA in Treatment

39

- Must complete PZA doses for 6 month regimen
  - 7 days/week for 8 weeks – 56 doses
  - 5 days/week for 8 weeks – 40 doses
  - 7 days/week x 2 weeks, then twice weekly for 6 weeks – 14 +12 = 26 doses
  - 5 days/week x 2 weeks, then twice weekly for 6 weeks – 10 +12 = 22 doses
  - 3 times/week for 8 weeks: 24 doses

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Monthly Clinical Monitoring

40

- Nurse or physician
  - Do in home at least every other month
  - Assess for response to treatment of potential medication side effects
  - Assess for barriers to care
  - Blood work frequency: required as needed, not as routine!
  - Visual acuity and color discrimination: Ethambutol
  - Auditory assessment: injectables

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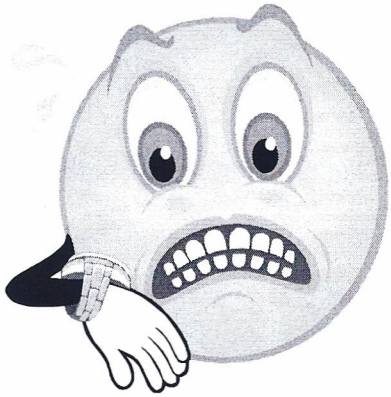
Reactions requiring immediate report

41

- Hold medication
  - Jaundice
  - Dark urine
  - Vomiting
  - Abdominal pain
  - Fever
  - Visual changes
  - Marked rash



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Reactions requiring a report in 24 hrs

42

- Do not hold without an order
  - Anorexia
  - Nausea
  - Malaise
  - Peripheral neuropathy
  - Rashes

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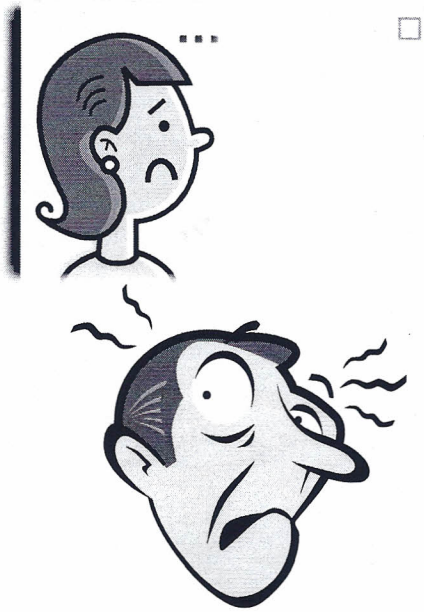
Addressing treatment complaints

43



- Common, manageable side effects
  - Fatigue
  - Nausea
  - Rash without hives
  - Headache
  - Tyramine reaction
  - Peripheral neuritis
  - Arthralgias
  - Sunburn

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Common problems/simple solutions (1)

44

- Fatigue
  - take meds at the end of the day
  - Reassure should improve with time
- GI symptoms/dyspepsia
  - Light meal
  - H_2 antagonists

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Common problems/simple solutions (2)

45

- Rash
  - Questions to Ask
    - Has this happened in the past?
    - When does it happen?
    - Localized or generalized?
    - Itchy? Painful? Hot? Dry?

  - Do not presume it is an allergic reaction
  - Topical treatment: corticosteroids, topical anesthetics or antihistamines
  - Oral antihistamines
  - Moisturizing may help

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Common problems/simple solutions (3)

46

- Headache
  - Take medication later in the day
  - Improve nutritional intake

- Tyramine reaction
  - Self limiting: headache, palpitations, upper body flushing and itching,
  - Consider food preferences
  - Not an allergic reaction but consider antihistamines

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Common problems/simple solutions (4)

47

- Peripheral Neuritis
  - Diabetic?
  - Vitamin B6/pyridoxine: 25, 50, 75, 100 and beyond
- Arthralgias
  - Other co-morbidity
  - Likely Rifamycin? (generalized)
  - Likely PZA? (joints)
  - Menopause?
  - Mild analgesic

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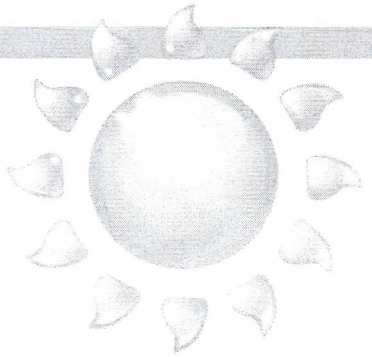
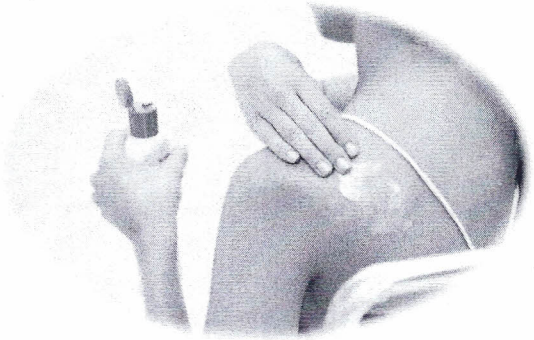
Common problems/simple solutions (5)

48

- Sunburn
  - Stay out of sun, HOWEVER, may not be as easy
  - Wear protective cotton clothing
  - Use sun block!





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Interruptions in Treatment

49

- In continuation phase
  - If less than 80% complete, resume, count doses; collect sputa
  - If more than 80% complete, may need no further treatment
  - Always check overall timeframes for regimen and count accurately

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Life happens!

50

- Going back to work
  - DOT Flexibility – Location, Time, Frequency
- Moving
  - Working with districts within Virginia
    - Reporting district maintains case management responsibility
    - Working district communicates status
      - Provide labs, DOT records
- Family/Friend difficulty
  - Living arrangements
  - Broken relationships

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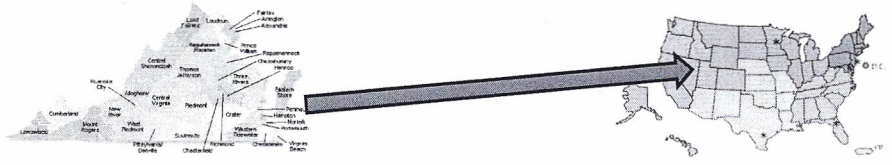
Relocating to another district or state

51

- Communicate with new location
- Open lines of communication to foster free flow of information
- **YOU** remain responsible for managing treatment course of your patient, even if cared for elsewhere
- Interstate: Interjurisdictional transfer required
  - Complete and forward to TB control by FAX



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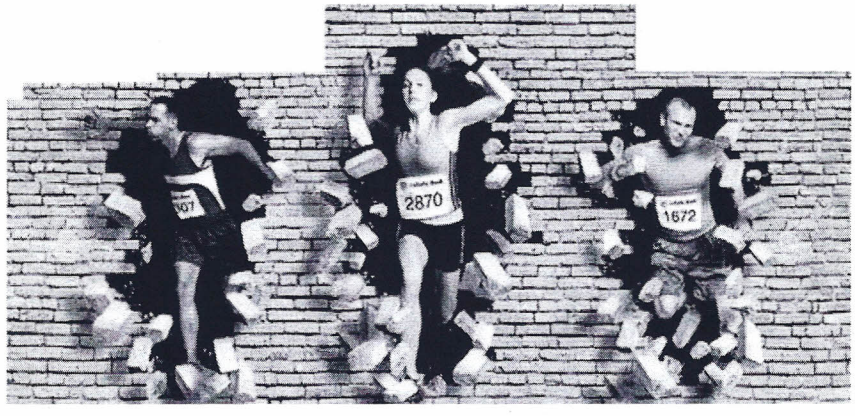
You've Broken through!

52



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53

Calculating Treatment Completion

TB Treatment Regimens

54

TABLE 2. Drug regimens for culture-positive pulmonary tuberculosis caused by drug-susceptible organisms

Initial phase			Continuation phase					
Regimen	Drugs	Interval and doses‡ (minimal duration)	Regimen	Drugs	Interval and doses‡¶ (minimal duration)	Range of total doses (minimal duration)	Rating* (evidence)† HIV	HIV*
1	INH RIF PZA EMB	Seven days per week for 56 doses (8 wk) or 5 d/wk for 40 doses (8 wk)¶	1a	INH/RIF	Seven days per week for 126 doses (18 wk) or 5 d/wk for 90 doses (18 wk)¶	182–130 (26 wk)	A (I)	A (II)
			1b	INH/RIF	Twice weekly for 36 doses (18 wk)	92–76 (26 wk)	A (I)	A (II)*
			1c**	INH/RPT	Once weekly for 18 doses (18 wk)	74–58 (26 wk)	B (I)	B (II)
2	INH RIF PZA EMB	Seven days per week for 14 doses (2 wk), then twice weekly for 12 doses (6 wk) or 5 d/wk for 10 doses (2 wk),¶ then twice weekly for 12 doses (6 wk)	2a	INH/RIF	Twice weekly for 36 doses (18 wk)	62–58 (26 wk)	A (II)	B (II)*
			2b**	INH/RPT	Once weekly for 18 doses (18 wk)	44–40 (26 wk)	B (I)	B (II)
3	INH RIF PZA EMB	Three times weekly for 24 doses (8 wk)	3a	INH/RIF	Three times weekly for 54 doses (18 wk)	78 (26 wk)	B (I)	B (II)
4	INH RIF EMB	Seven days per week for 56 doses (8 wk) or 5 d/wk for 40 doses (8 wk)¶	4a	INH/RIF	Seven days per week for 217 doses (31 wk) or 5 d/wk for 155 doses (31 wk)¶	273–195 (39 wk)	C (II)	C (III)
			4b	INH/RIF	Twice weekly for 62 doses (31 wk)	118–102 (39 wk)	C (II)	C (III)

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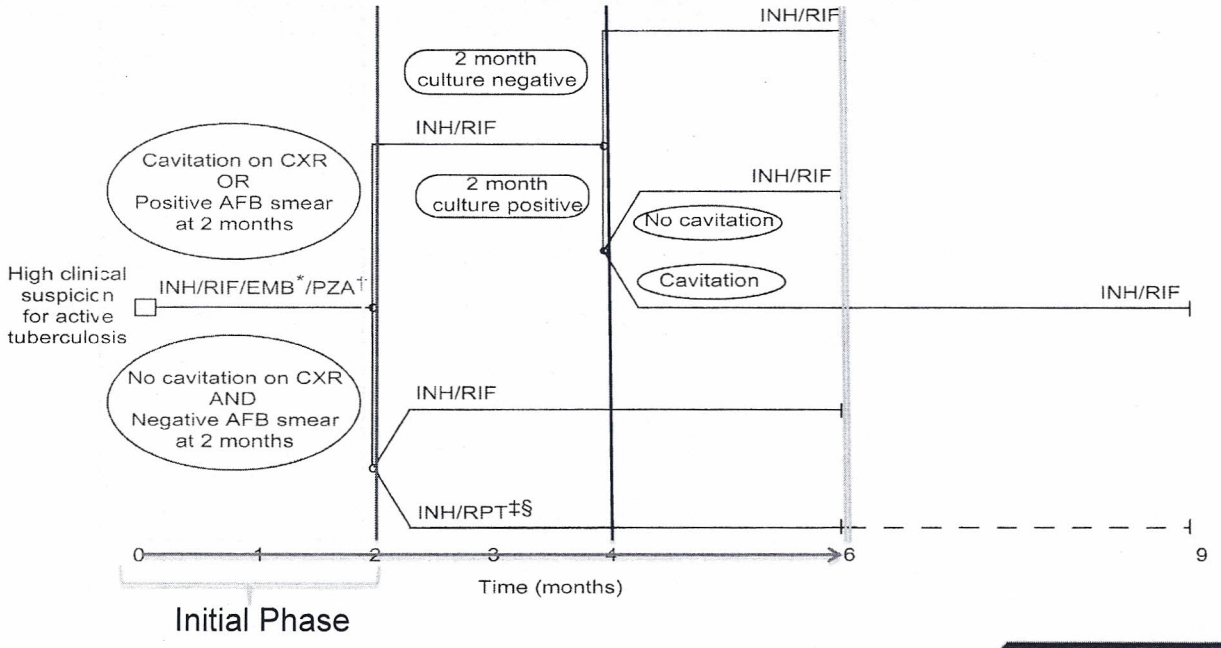
Completing treatment

55



Counting Doses

56

Guidelines for Determination of Completion of Treatment

- Counts doses observed, not the calendar
  - 2 month initial phase completed in 3 months
  - 6 months within 9 months
  - 9 months within 12 months
  - Non-standard regimens require individualized approach

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DOT

57

- Program standard
  - All doses DOT – DOT
  - No doses DOT – Self administered
  - Any doses self administered – DOT/self administered
  - Other health care facility - Assess quality of DOT
- Video Observed Treatment
- Exceptions
  - Patients not reported at the onset of treatment
  - Physician refusal

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Adding it all up!

58

TB Case Completion /Discontinue Medicine Report

- Non DOT counted doses should be extremely rare
- Facility doses should only be counted if documentation is provided
- Detail any non-DOT counted doses or facility counted doses
- Initial phase must include 40 (or more) doses of PZA for a 6 month regimen
- The continuation phase begins at the 41st dose, even when 4 drugs are continued

Doses Required for Completion of Initial Phase of Treatment
(I,R,E,Z regimens only. Not for use for cases on second line drugs)

Regimen	Days per week	Total doses	Number of weeks
Daily	7 days per week	56	8
*Weekday daily	5 days per week	40	8
Two weeks daily, then twice weekly	7 days/week for 2 weeks, then two times per week	14 daily doses, then 12 twice weekly doses (26 total doses)	8
*Two weeks weekday daily, then twice weekly	5 days /week for 2 weeks, then two times per week.	10 weekday daily doses, then 12 twice weekly doses (22 total doses)	8
Thrice weekly	3 times per week	24	8

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Monitoring Changes to Therapy

59

- Assure drug susceptibility results are available before stopping any drugs
- 4 month regimen for culture negative pulmonary TB
- Review dose count if drug resistance
  - Count dose only if it is acceptable regimen
  - Consult with TB physician

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Doing the Math for the Perfect Patient

60

Doses Required for Completion of Continuation Phase of Treatment
(Use for uncomplicated cases on INH/rifamycin regimens only. Not for use for cases on second line drugs)

Regimen	Days per week	Total doses	Number of weeks
Daily	7 days per week	126	18
Weekday daily	5 days per week	90	18
*Twice weekly	2 days per week	36	18
#Once weekly (INH/rifapentine regimen only)	1 day per week	18	18
~Thrice weekly	3 days per week	54	18

*DDP-TB recommended option except for patients with HIV infection.

DOT doses at 7 days per week regimen = _____ ÷ 7 = _____ weeks therapy
DOT doses at 5 days per week regimen = ___40__ ÷ 5 = ____8__ weeks therapy
DOT doses at 3 days per week regimen = _____ ÷ 3 = _____ weeks therapy
DOT doses at 2 days per week regimen = ___36__ ÷ 2 = ___18__ weeks therapy
DOT doses at 1 day per week regimen = _____ ÷ 1 = _____ weeks therapy

Add all the weeks of therapy above to calculate

TOTAL WEEKS OF THERAPY = ___26_____

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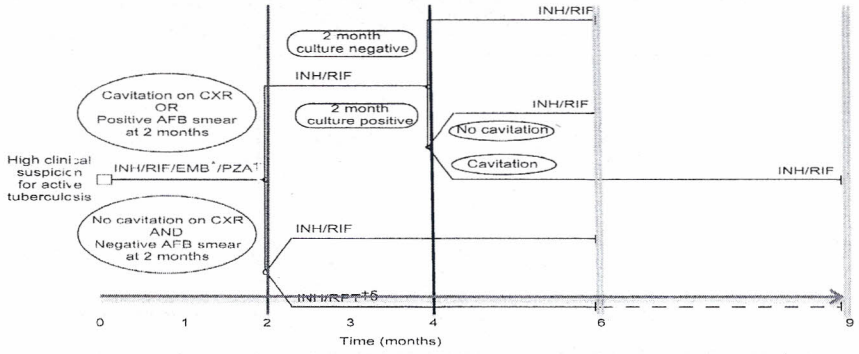
Completing Treatment - 9 months

61



DOT doses at 7 days per week regimen = _____ ÷ 7 = _____ weeks therapy

DOT doses at 5 days per week regimen = ___40__ ÷ 5 = ____8__ weeks therapy

DOT doses at 3 days per week regimen = _____ ÷ 3 = _____ weeks therapy

DOT doses at 2 days per week regimen = ___62__ ÷ 2 = ___31__ weeks therapy

DOT doses at 1 day per week regimen = _____ ÷ 1 = _____ weeks therapy

Add all the weeks of therapy above to calculate

TOTAL WEEKS OF THERAPY = ___39_____

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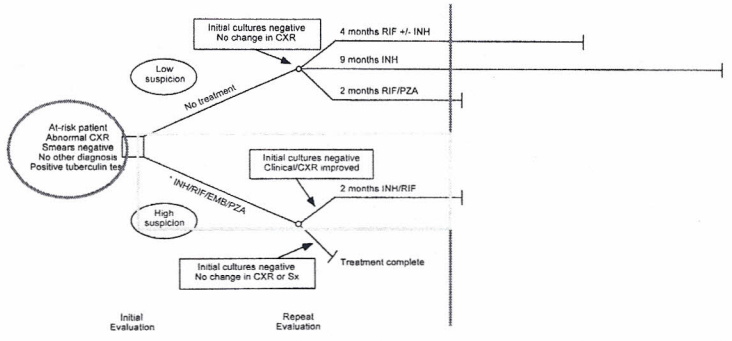
Culture Negative - 4 months

62



DOT doses at 7 days per week regimen = _____ ÷ 7 = _____ weeks therapy

DOT doses at 5 days per week regimen = ___40__ ÷ 5 = ___8___ weeks therapy

DOT doses at 3 days per week regimen = _____ ÷ 3 = _____ weeks therapy

DOT doses at 2 days per week regimen = ___16__ ÷ 2 = ___8___ weeks therapy

DOT doses at 1 day per week regimen = _____ ÷ 1 = _____ weeks therapy

Add all the weeks of therapy above to calculate

TOTAL WEEKS OF THERAPY = ___16_____

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Virginia Department of Health
TB Case Completion /Discontinue Medicine Report
Fax to TB Control Program
804-371-0248

Date form completed:_____

6

Name:_____DOB_____
PHN_____ (phone number_____)

Date Therapy Stopped: _____

Reason Therapy Stopped
__ Completed therapy
__ Lost
__ Uncooperative or refused
__Adverse treatment event
__Not TB
__Died
__Other_ (specify_____

If died, indicate cause of death (select one) Date of Death: _____
__ Related to TB disease
__Related to TB therapy
__Unrelated to TB disease
__ Unknown

Reason therapy extended beyond 12 months (select all that apply)
__Rifampin resistant
__Adverse drug reaction
__Non-adherence
__Treatment failure
__Clinically indicated- other reasons
__Other (specify)_____

Dose counts (complete for ENTIRE treatment regimen whether provided in VA or not) Complete only those sections appropriate for each client based on drug order for treatment regimen. Non-DOT counted doses should be extremely rare. Facility doses should only be counted if facility documentation provided. Detail any non-DOT counted doses or facility counted doses in the space below.

DOT doses at 7 days per week regimen = _____ ÷ 7 = _____ weeks therapy
DOT doses at 5 days per week regimen = _____ ÷ 5 = _____ weeks therapy
DOT doses at 3 days per week regimen = _____ ÷ 3 = _____ weeks therapy
DOT doses at 2 days per week regimen = _____ ÷ 2 = _____ weeks therapy
DOT doses at 1 day per week regimen = _____ ÷ 1 = _____ weeks therapy

Add all the weeks of therapy above to calculate
TOTAL WEEKS OF THERAPY = _____

Send DOT records for review BEFORE stopping treatment If you need assistance with calculating doses

Jane Moore

Debbie Staley

Denise Dodge

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Contact investigation – Round 2

64

VIRGINIA DEPARTMENT OF HEALTH DIVISION OF TUBERCULOSIS (TB) CONTROL ~ TB CONTACT INVESTIGATION FORM (TB 502)

WebVision/ID #: Cronie Boudreaux Case Mgr: P. Regan Ph. #: 804-864-7969
Report Source: VCU Date Reported to HD: 7/22/12 Date CI Initiated: 7/23/12
Type of Investigation: X Contact Source Case | Type of Case/Suspect: X Pulmonary Smear Pos ___Pulmonary Smear Neg. ___Extrapulmonary ___Clinical
Infectious Period: Date Began: 3/1/12 Date Ended: ~~TODAY~~ 8/14/12

Contact Name: (*)	Priority	Hx of Prior (+) TST or TB	LTBI Test Used: X TST ___IGRA	CXR Date	Case: ___Yes X No	Comments/Address if needed:
John Boudreaux DOB 9/21/54 Race W m or f Relationship: Household ✓Yes ___No Spouse Last exposure date: 7/20/12	X High ___Med ___Low Symptoms ___Yes X No	___LTBI ___TB Disease Hx of prior Tx: Explain: N/A	Round 1, Date tested: 7/24/12 Result: 10 mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline Round 2, Date tested: Result: ___mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline	8/3/12 Result: X Normal ___Abnormal ___Cavitary ___Non Cav.	LTBI Tx Recommended: X Yes ___No If Yes: Tx: Start: 9/1/12 Tx: Stop: Stop Reason:	Pt went to ER w/ Index. Index admitted to hospital 7/20/12.
Contact Name: (*)	Priority	Hx of Prior (+) TST or TB	LTBI Test Used: X TST ___IGRA	CXR Date	Case: ___Yes ___No	Comments/Address if needed:
Jason Boudreaux DOB 6/2/87 Race W m or f Relationship: Household ___Yes X No Son Last exposure date: 4/1/12	X High ___Med ___Low Symptoms ___Yes X No	___LTBI ___TB Disease Hx of prior Tx: Explain: N/A	Round 1, Date tested: 7/24/12 Result: 0 mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline Round 2, Date tested: Result: ___mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline	Result: ___Normal N/A Abnormal ___Cavitary ___Non Cav.	LTBI Tx Recommended: ___Yes ___No If Yes: Tx: Start: Tx: Stop: Stop Reason: N/A	Last exposure date = 4/1/12 - one test is sufficient. No infection
Contact Name: (*)	Priority	Hx of Prior (+) TST or TB	LTBI Test Used: X TST ___IGRA	CXR Date	Case: ___Yes X No	Comments/Address if needed:
John Boudreaux Jr DOB 2/4/82 Race W m or f Relationship: Household ___Yes X No Son Last exposure date: 6/20/12	X High ___Med ___Low Symptoms ___Yes X No	___LTBI ___TB Disease Hx of prior Tx: Explain: N/A	Round 1, Date tested: 7/24/12 Result: 0 mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline Round 2, Date tested: 9/30/12 Result: 13 mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline	10/20/12 Result: X Normal ___Abnormal ___Cavitary ___Non Cav.	LTBI Tx Recommended: X Yes ___No If Yes: Tx: Start: 11/1/12 Tx: Stop: Stop Reason:	
Contact Name: (*)	Priority	Hx of Prior (+) TST or TB	LTBI Test Used: ___TST ___IGRA	CXR Date	Case: ___Yes X No	Comments/Address if needed:
Carol Hughes DOB 10/4/55 Race W m or f Relationship: Household ___Yes X No Close friend Last exposure date: 7/4/12	X High ___Med ___Low Symptoms ___Yes X No	X LTBI ___TB Disease Hx of prior Tx: Explain: Louisville, KY TST - 17mm on 5/5/2005 Completed 9mo INH on 2/20/2006	Round 1, Date tested: Result: ___mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline Round 2, Date tested: Result: ___mm if TST ___N/A ___Pos. ___Neg. ___Indeterminate/Borderline	Result: ___Normal ___Abnormal ___Cavitary ___Non Cav.	LTBI Tx Recommended: ___Yes X No If Yes: Tx: Start: Tx: Stop: Stop Reason:	Symptoms Screen done, N/C further follow up needed.

(*) Contact information should include Name, WebVision #, Birth date, Race, Sex, relation to index, if living with index, and Last exposure date; address and phone # may go in Comments. July 2011 TB 502

Rnd 1 to Rich - 8/15/12
Rnd 2 to Rich - 11/30/12

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Objectives Answered

65

- Describe 3 critical nurse case management decision points during TB treatment
- Explain the rational for monitoring bacteriology culture conversion
- List 4 ongoing TB nurse cases management interventions that may improve treatment outcomes
- Explain criteria used for determining treatment completion

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Where we Began: The Goals Nurse Case Management

66

Goals

- To cure the individual
- To minimize transmission of Mycobacterium *tuberculosis* to others

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Upcoming TB Trainings in the Series

- Friday, April 26, 1-3 P.M. "TB Contact Investigation" – Denise Dodge and Paul Regan
- Friday, May 31, 10 A.M. – 12 P.M. – "Complex TB Cases" – Denise Dodge and Debbie Staley
- Unknown date and time – "The Odds and Ends"

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