TB Nurse Case Management

Is it a Sprint……or a Marathon?

(or the challenging first 2 months)

Debbie Staley, RN, MPH
TB Control and Newcomer Health Program
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Challenges of TB Nurse Case Management

The first 2 months are the hardest

- Lots of communication…and negotiation
- Establish rapport
- Accomplish multiple tasks:
  - Evaluation and treatment assurance
  - Education
  - DOT
  - Contact investigation
  - Collecting medical records
- Isolation decisions and impacts
- May not "look like" you are working
- Documentation, documentation, documentation!

Objectives

Participants will be able to:

- State the issues that must be addressed before a TB suspect leaves a hospital setting
- List the criteria for release from home isolation for TB suspects
- Identify 4 nursing interventions that contribute to successful TB case management
- List 4 resources or tools available through the TB program to support successful TB case management

What is TB Nurse Case Management?

- A collaborative process that assesses, plans, implements, coordinates, monitors and evaluates the options and services required to meet the TB client's health and human service needs, AND assures thorough evaluation, education and offer of treatment to appropriate identified contacts of cases.

Who Gets TB Nurse Case Management?

- All TB suspects, cases, and contacts
  - Respiratory and extra-pulmonary site of disease
  - Private or public health clinical management
  - All receive
    - Assurance of adequate evaluation and therapy
    - Source of affordable drugs
    - Education
    - Assurance of contact identification and evaluation
    - Monitoring for improvement/culture conversion
    - Assurance of completion of treatment

The Goals and Responsibility for Case Management

Goals

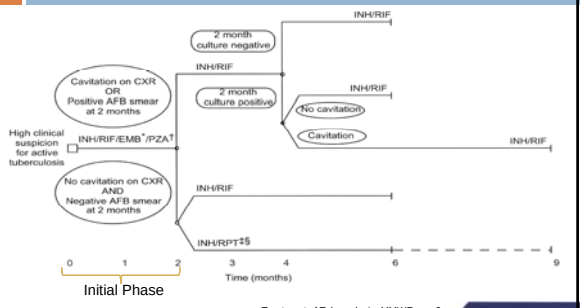
- To cure the individual
- To minimize transmission of Mycobacterium *tuberculosis* to others

Responsibility

- "…in all cases the health department is ultimately responsible for ensuring that adequate, appropriate diagnostic and treatment services are available, and for monitoring the results of therapy."

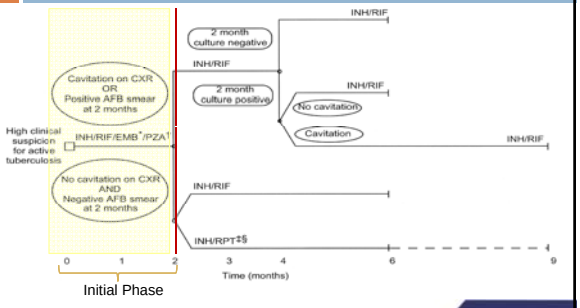
Treatment of Tuberculosis, MMWR, pg. 1

Decision Points



Treatment of Tuberculosis, MMWR, pg. 6

The Sprint – the first two months



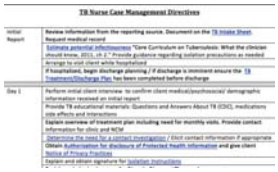
The Health Department Report - 1

- Suspicion or confirmed TB required to be rapidly reported, at least at time TB drugs are started
- Have a method to track all reports
- Assign responsibility to a case manager (1 day)




The Health Department Report - 2

- Begin to collect information
- Document – what form is used depends on how report received
- Resource – TB Nurse Case Management Clinical Pathway


TB Nurse Case Management Directives

TB Referral Documentation

- Three forms for TB referrals
  - TB Intake Form – for phone calls or lab results
  - TB 512 – TB Risk Assessment – immigrants, contacts
  - Contact Registration – larger contact investigations
- Each case should have <u>one</u> of these

Collecting Information

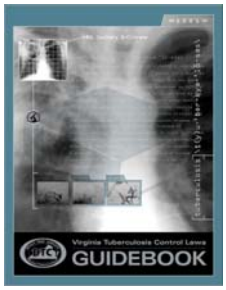
- Contact reporting source for more information
- If lab result, contact ordering MD/facility
- Determine treating clinician and plan
- Arrange contact with client (1-3 days)
- Visit client
- Collect medical documentation
  - H&P
  - Labs
  - Radiology
  - Consults

Assess for Infectiousness Potential

- Client characteristics
  - Cough
  - AFB+ sputum smear
  - Cavitation
  - Adolescent or adult patient
  - No or ineffective treatment
- Determine estimate of period of infectiousness
- Assess household to which client may return
  - Children < age 5
  - New members not previously exposed

Working with Facilities – Discharge Planning

- TB Control Laws Guidebook
- TB Treatment/Discharge Plan with local health director or designee approval required before discharge.
- TB Treatment plan can be requested of PMD.



Interventions if Potentially Infectious

- Assure airborne isolation if in a facility
- Isolation Agreement
- Surgical mask for client
- N 95 for all health care workers

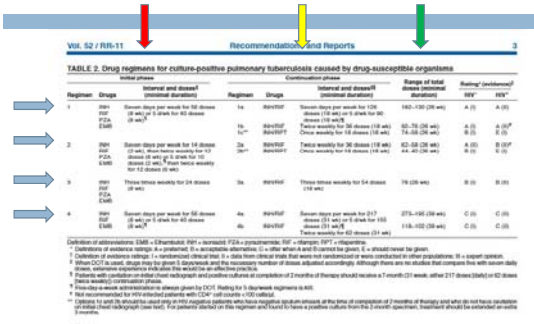
TB Treatment/Discharge Plan

- Demographics and treatment information (section 1 & 2) completed by facility/clinician and signed by clinician
- LHD completes third section
- Signatures in section 4

TB Treatment Regimens -1

- Treatment of Tuberculosis, pg. 3
  - 4 standard regimens
  - 3 regimens include:
    - Isoniazid
    - Rifampin/Rifabutin
    - Ethambutol
    - Pyrazinamide
  - All standard regimens have 2 phases:
    - Initial Phase - 2 months
    - Continuation Phase - 4-7 months

TB Treatment Regimens - 2



TB Treatment Regimens - 3

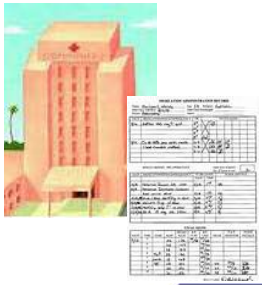
- Initial Phase – 4 drugs
  - Exceptions - pregnancy/ no PZA (Regimen 4)
  - Exceptions - young children / some may exclude EMB
- 3 regimens begin with daily dosing
- Regimen 3, 4 drugs begins with 3x/wk dosing
- DOT is a program standard
- Counts doses observed, not the calendar

TB Treatment Regimens - 4

- 5 d./wk "daily" regimens require DOT
- Week 3-8 of initial phase:
  - may be daily or intermittent
  - Warning!
    Intermittent regimens can involve up to 14 pills/dose
  - Exception!
    HIV+ individuals with CD4 counts <100
    should be daily or 3x/wk. only (VA TB Program prefers daily)

TB Treatment Regimens - 5

- Whether to count doses in a facility depends on
  - Knowledge of facility practice
  - Medication administration record (MAR) received



TB Treatment Regimens - 6

4 MMWR June 20, 2003

TABLE 3. Doses* of antituberculosis drugs for adults and children†

Drug	Preparation	Adults/children	Doses: Daily	Doses: 2×/wk	Doses: 3×/wk
First-line drugs					
Isoniazid	Tablets (50 mg, 100 mg, 300 mg), elixir (50 mg/5 mL), aqueous solution (100 mg/ml) for intravenous or intramuscular injection	Adults (max.) / Children (max.)	5 mg/kg (300 mg) / 10–15 mg/kg (300 mg)	15 mg/kg (900 mg) / —	15 mg/kg (900 mg) / —	15 mg/kg (900 mg) / —
Rifampin	Capsule (150 mg, 300 mg); powder may be suspended for oral administration; aqueous solution for intravenous injection	Adults§ (max.) / Children (max.)	10 mg/kg (600 mg) / 10–20 mg/kg (600 mg)	— / —	10 mg/kg (600 mg) / 10–20 mg/kg (600 mg)	10 mg/kg (600 mg) / —
Rifabutin	Capsule (150 mg)	Adults§ (max.) / Children	5 mg/kg (300 mg) / Appropriate dosing for children is unknown	— / Appropriate dosing for children is unknown	5 mg/kg (300 mg) / Appropriate dosing for children is unknown	5 mg/kg (300 mg) / Appropriate dosing for children is unknown
Rifapentine	Tablet (150 mg, film coated)	Adults / Children	— / The drug is not approved for use in children	10 mg/kg (continuation phase) (600 mg) / The drug is not approved for use in children	— / The drug is not approved for use in children	— / The drug is not approved for use in children
Pyrazinamide	Tablet (500 mg, scored)	Adults / Children (max.)	See Table 4 / 15–30 mg/kg (2.0 g)	— / —	See Table 4 / 50 mg/kg (2 g)	See Table 4 / —
Ethambutol	Tablet (100 mg, 400 mg)	Adults / Children¶ (max.)	See Table 5 / 15–20 mg/kg daily (1.6 g)	— / —	See Table 5 / 50 mg/kg (2.5 g)	See Table 5 / —

Treatment of Tuberculosis, pg. 4-5

TB Treatment Regimens - 7

TABLE 4. Suggested pyrazinamide doses, using whole tablets, for adults weighing 40–90 kilograms

	Weight (kg)*		
	40–55	56–75	76–90
Daily, mg (mg/kg)	1,000 (18.2–25.0)	1,500 (20.0–26.8)	2,000† (22.2–26.3)
Thrice weekly, mg (mg/kg)	1,500 (27.3–37.5)	2,500 (33.3–44.6)	3,000† (33.3–39.5)
Twice weekly, mg (mg/kg)	2,000 (36.4–50.0)	3,000 (40.0–53.6)	4,000† (44.4–52.6)

*Based on estimated lean body weight.
†Maximum dose regardless of weight.

TABLE 5. Suggested ethambutol doses, using whole tablets, for adults weighing 40–90 kilograms

	Weight (kg)*		
	40–55	56–75	76–90
Daily, mg (mg/kg)	800 (14.5–20.0)	1,200 (16.0–21.4)	1,600† (17.8–21.1)
Thrice weekly, mg (mg/kg)	1,200 (21.8–30.0)	2,000 (26.7–35.7)	2,400† (26.7–31.6)
Twice weekly, mg (mg/kg)	2,000 (36.4–50.0)	2,800 (37.3–50.0)	4,000† (44.4–52.6)

*Based on estimated lean body weight.
†Maximum dose regardless of weight.

Treatment of Tuberculosis, pg. 5

Plan for TB Medications

- Prescribing physician identified
- Source of drugs
  - Local pharmacy using prescription plan
    - Assure availability
    - Co-pay reimbursement on case-by-case basis by TB Program*
  - State Pharmacy
    - Client portion reimbursable*
  - Second Line Drug Program

*"Funding assistance for TB Treatment" link on VDH website

The First (Home) Visit – Initiating HD Services

- What you will need
  - Blank TB record documents/already completed records
  - Client medical records
  - Teaching materials
  - Drug information sheets
  - BP cuff/stethoscope, thermometer, and scale (portable)
  - Supplies for phlebotomy and TST or IGRA if indicated
  - "E" chart card and color vision test book
  - 3 sputum cans
  - Nebulizer, saline, tubing

The TB Interview-1

- Purpose
  - Build rapport
  - Gain information
  - Provide TB disease education
  - Assess client/obtain baseline clinical information
  - Collect specimens/diagnostic or baseline testing
  - Explain and arrange contact investigation
  - Identify other locations (work, school) where contact investigation may be needed
  - Obtain necessary signatures

The TB Interview - 2

- VDH TB and health assessment/history
- TB disease process, transmission, infection control education
- Medication List - look at meds; list all medications
- Explain the TB Medication Regimen
  - Show the medications
  - Review side effects – especially hepatotoxicity
  - Discuss compliance and potential development of resistance if not compliant
  - Develop DOT plan and complete agreement

The TB Interview - 3

- Identification of Contacts
- Utilize the:
  - "Contact Priority Assignment Tool"
  - TB Program Contact Investigation Algorithm
  - MMWR Guidelines for Investigation of Contacts…12/05
- Emphasize confidentiality policy

The TB Interview - 4

- Discuss precautions/activities to avoid
  - Alcohol and drug use
  - Barrier birth control for women
  - Contact lenses and rifamycins
  - Exposure to others
- Monthly Clinical Assessment flow sheet
  - BP, temp, wt., symptoms, indicate if sputa collected
  - ETOH/substance abuse
  - Nutrition resources and diet
  - Testing done - labs, sputa, vision, hearing, other
  - LMP

The TB Interview – 5

- Isolation Agreement
  - Activities to avoid
  - Activities allowable
- Discuss criteria for release from isolation*
  - Clinical improvement
  - DOT with adherence
  - Sputum smear conversion/plan for sputa collection
  - Evaluation/treatment of household contacts

Controlling TB in the United States, Box 3, pg.9 and "TB Transmission" link on VDH website

The TB Interview – 6

- For the hospitalized, to release from All
  - 3 consecutive negative AFB smears
  - Collected at least 8 hrs. apart
  - One specimen collected in early morning
- Also needed for release to a congregate setting

Identifying Barriers to Adherence

- Homelessness
- Substance abuse
- Loss of income
- Shame/embarrassment
- Untreated psychiatric diagnoses
- Meaning of diagnosis in cultural context
- Non-English speaker

Interventions for Barriers to Adherence - 1

- HIP Program
  - Contact the TB Control Program
  - Program of last resort
  - Can assist with
    - Money for food
    - Assist with mortgage payment
    - Enablers or incentives on case-by-case basis
- Motel payment for homeless and smear+

Interventions for Barriers to Adherence- 2

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

The TB Record

- Other forms to explain and complete!
  - Consent for Care – discuss charges
  - "HIPPA Privacy Practices" given
  - Documentation of Receipt of Privacy Practices
  - Authorization for Disclosure of Protected Health Information
  - Uniform release to exchange health information
  - Voter Registration
  - Agency Voter Receipt

DOT

- PHN completes the drug regimen on the DOT administration record
- DOT record may be in a separate folder
- Should be taken to the home during dose observation
- Initials and time of every dose by the observer
- Ingestion observed with every dose
- Side effects asked at every encounter
- Intermittent doses have spacing requirements
- No DOD – directly observed delivery

Contact Investigation

- Review period of infectiousness
- Contact and arrange testing (TST or IGRA) for high priority contacts within 7 days of identification
- Refer to Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis
- VDH Nursing Directive
- VDH Contact Investigation Algorithm
- VDH Contact Priority Assignment Tool

Serum Drug Levels - 1

- Collect 2 weeks after treatment start for all diabetics or for relapse with prior TB in last 2 yrs.
- Call TB Program for authorization before test
- Instructions will be faxed with lab slip
- Testing done for INH and RIF
- Information of UVA study for client signature if willing to participate
- Specimen ships on dry ice to Florida

Serum Drug Levels - 2

- The recommendations for serum drug level testing and update for diabetic testing are posted on the VDH TB website
  - Guidance for dose adjustment is included
- Serum drug levels should be drawn the day after any dose adjustment
- Most dose adjustments require only 1 dose increase

Sputa Collection - 1

- 3 consecutive sputa to assist with TB diagnosis
- Once every 2 weeks after initial series of 3
  - Monitors clinical improvement
  - May be done in one week if smear not strongly positive
- After first negative smear, collect 2 additional
  - One specimen health care worker observed
- Continue until 3 consecutive neg. AFB sputa smears

Sputa Collection - 2

- Collect 3 sputa monthly until culture conversion is documented
- Collect a cluster of 3 sputa between day 55-60 after treatment start

Sputa Collection - 3

- Smear conversion – three consecutive negative smears, with no positive AFB smears thereafter
- Culture conversion – two consecutive negative cultures, with no positive M. *tb.* cultures thereafter; at least 7 days after treatment start; date of conversion is the first of the two specimens

Sputa Collection - 3

- Rinse mouth before collection
- No use of mouthwash
- Avoid food before collection
- Do not touch inside of collection tube or lid
- Do not touch mouth to collection tube
- Sputum induction with nebulizer may be needed
  - Use hypertonic saline (10% saline recommended)
  - May take 30 minutes of inhalation

The TB Service Plan

- Complete after initial assessment
- Made to be created on-line; tailored to client
- Initial each section as covered
- Leave room to note covering the same topics on several dates
- Document client expressed understanding in progress notes
- Update as necessary

Monitoring for Clinical Improvement

- Decrease in cough, fever, night sweats
- Increase in appetite, energy
- Weight gain
- Decrease in AFB smear positivity

Monthly Clinical Monitoring

- Monthly clinical assessment by MD or PHN
- Follow district protocol for lab work frequency
- Assess side effects to medication
- Alcohol use
- LMP
- Vision while on EMB-report changes in 1 day
- Hearing if on an injectable drug

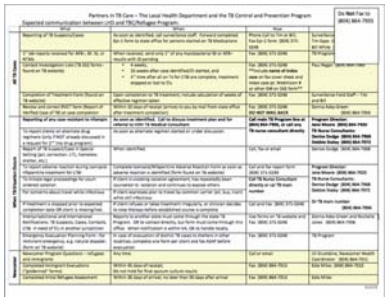
Addressing Problems

- Notify clinician and health director if no improvement
- Address non-adherence promptly
  - Counseling by PHN, physician
  - Counseling letter; see VA TB Law Book
- Adverse reactions to medication
  - Consult with clinician and/or health director
- Request consultation with TB Program Medical consultant

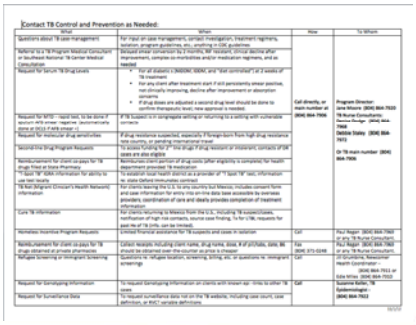
Monitoring Changes to Therapy

- Assure drug susceptibility results are available before stopping any drugs
- Count doses, assure correct number of PZA doses before stopping
- Review dose count if drug resistance
  - Count dose only if it is acceptable regimen

Expected Communication with TB Program



Communication with the TB Program



Upcoming TB Trainings in the Series

- Thursday, April 11, 2-4 P.M. "Ongoing Monitoring in TB Nurse Case Management" – Denise Dodge
- 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

Questions???