HEALTHY CHICAGO
CHICAGO DEPARTMENT OF PUBLIC HEALTH

Day in the Life of a TB Nurse Case Manager

Naeemah McMillon, BSN, RN
Charamonte Oladeji, MSN, RN
Angela Okafor, BSN, RN
Chicago Department of Public Health

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RUSH UNIVERSITY MEDICAL CENTER

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Naeemah McMillon, Charamonte Oladeji, and Angela Okafor

Learning Objectives

At the conclusion of this course participants will be able to:

- Discuss the prognosis and mortality rate of untreated pulmonary TB
- Recall local, state, and national TB data trends; Define whole genome sequencing (WGS) and how it is used in TB epidemiologic and contact investigations.
- Describe steps needed for a mass TB screening; identify appropriate TB test for individual patients.
- Identify strategies to reduce or stop alcohol consumption among patients with TB
- Identify components of nurse care management as it pertains to tuberculosis and discuss various approaches to challenging situations

To obtain credit you must:

- **Complete an electronic evaluation**
- **After completing the evaluation you can generate your certificate immediately.**

In support of improving patient care, Rush University Medical Center is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team.

Rush University Medical Center designates this live activity for a maximum of 3.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ANCC Credit Designation – Nurses
The maximum number of hours awarded for this CE activity is 3.5 contact hours.

This activity is being presented without bias and without commercial support.

Rush University is an approved provider for physical therapy (216.000272), occupational therapy, respiratory therapy, social work (159.001203), nutrition, speech-audiology, and psychology by the Illinois Department of Professional Regulation.

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Nurse Case Management

Coordination of necessary medical, nursing, outreach and social services systems which ensure that all persons with confirmed or clinically suspected TB are started on appropriate therapy, and that all persons with confirmed TB complete an appropriate and effective course of treatment

CDPH TB Nurse Case Managers

- 4 Registered Nurses that provide home visits to patient in all 77 community areas of Chicago
- Work in a non-clinical setting where we collaborate care with CCHHS
- Receive referrals from Hospitals, primary medical doctors, or patients reaching out to the health department. Nurses receive referrals for City of Chicago Residents only

Nursing Process

- Nurse receives referral from Direct Supervisor; referral is a snapshot of patient information and condition
- Initial Case assessment performed by the nurse shall be within 3 working days of notification of a potential case of TB
- Nurse goes to patient home, hospital, or living facility to assess how sick the patient is and if any further interventions need to be made

Nursing Process Cont.

- During the home visit , the nurse is able to determine if there are potential barriers that will affect adherence to therapy
- Isolation is determined by the nurse, factors to consider are whether the person has active TB and if they are infectious
- During the home visit, the nurse determines if the medication regimen is correct and being taken properly
- During the home visit, the nurse educates patient and family members on disease

Educating Patients on TB

Important part of ensuring that patients with pulmonary and/or non pulmonary TB are managed properly, rendered non-infectious, and cured of their disease is through education.

Education information on TB include:

- Causes of TB
- Transmission
- Diagnosis
- Treatment plan
- How to take medication
- Side effects of medication
- Measures to prevent the spread of TB

Potential Barriers

Assessment of potential barriers that will affect adherence to therapy can include:

- Homelessness
- Language barriers
- Work schedules
- Substance abuse
- Mental health status
- Recent immigration
- Poverty

Certain medical conditions may interfere with treatment

Incentives & enablers are given in certain circumstances

Managing the Patient's Care

It's the nurses responsibility to make sure the provider is updated on

- All lab results
- Sputum conversions
- Susceptibilities
- Adverse side effects

The nurse is responsible for making and ensuring patients keep all their medical appointments. The nurse is the patients advocate.

Managing the Patient's Care

- Nurse makes sure the patient has medication daily and is on Directly Observed Therapy (DOT)
- Adhering to a treatment plan requires DOT; it's the nurse responsibility to transcribe the sheets for DOT worker to use monthly and to monitor and change patient's regimen as prescribed by the physician

Patient Background

- 27 y/o Asian female referred by a local Medical Group for additional evaluation. Initially presented to the Medical Group for clearance to work in a hospital
- Noted to have a positive QuantiFERON - TB Gold test on 3/18/18 and abnormal chest x-ray on 5/17/18
- Reported having a positive tuberculin skin test and abnormal chest x-ray in 2007
- Born and raised in Southeast Asia and relocated to USA in 2007 at which time she moved to the West Coast. At that time she was treated with Isoniazid for latent TB but stopped after three months citing insurance issues.
- Moved to Chicago in January 2018 and denied any past medical history, problems, alcohol and substance use

Assessment

- Initial visit included an in-depth nursing assessment
- Sputum was collected on three consecutive days 6/25, 6/26 and 6/27/18

Diagnosis

- Diagnosis is done through microscopic observation (smear) and by biochemical or molecular identification (culture).
- The culture is determined by two methods through traditional solid and liquid media
- Rapid diagnosis via nucleic acid amplification tests (NAAT)

Results

- Microscopic observation were negative X 3
- On 7/25/18 a positive culture for TB was received from the specimen collected on 6/25/18. Hence TB disease.

Treatment

- Uncomplicated TB (6-9 months) including the approved first line anti-TB core agents: RIPE
- Dosage is based on weight
  - Rifampin (RIF)
  - Isoniazid (INH)
  - Pyrazinamide (PZA)
  - Ethambutol (EMB)

Treatment

- Treatment began 7/27/18 initially without complaints until 9/2018 when she began to complain of nausea and epigastric pain.

Further clinical

- Evaluation revealed elevated liver enzymes most likely caused by Isoniazid (drug induced hepatotoxicity)
- Drug susceptibility testing showed low-level INH resistance
- Medications were discontinued for one week with close monitoring of liver function and gradual introduction of all medications with the exception of INH
- Patient progressed well with treatment

Challenges in Active TB Cases Treatment

- Congregate Settings
  - Hospitals
  - Correctional facilities
  - Homeless shelters
  - Schools/Daycare
  - Nursing homes
  - Places of worship
  - Social settings

Challenges in Active TB Cases Treatment

- Other challenges
  - Collaboration
  - Communication
  - Incomplete information
  - Collaborating TB providers
  - Legal implications
  - Stigma
  - Continuity of care

Possible Solutions

- Trainings and Coordinated meetings
  - Outreach community
  - Shelters
  - Hospitals
  - Early notification of TB cases/suspects
  - Well-defined legal issues
  - Hospital discharge planning checklist

Possible Solutions

- Increase communication between LHD and correctional facility
- Increase ongoing guidance to our collaborating TB providers
- Establish facilities where smear AFB positive patients will stay until diagnosis is confirmed
- Steps to avoid stigma

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@ChiPublicHealth

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HealthyChicago@CityofChicago.org

www.CityofChicago.org/Health