

BACKGROUND

In 2004, the NTCA President called for a dialogue on educating the public health workforce to address projected workforce shortages in tuberculosis (TB) programs. An interest group of national leaders in TB control was convened to discuss issues of competencies, workforce shortages, and needs enumeration. The group agreed that common competencies linked with job responsibilities should be identified to support competency-based training and development of professionals capable of demonstrating best practices in TB prevention and control programs.

For the TB Nurse Case Manager role, six domains were selected from the Quad Council of Public Health Nursing Organizations and the Council on Linkages Between Academia and Public Health Practice that most accurately describe and define the role of the TB Nurse Case Manager. The *Tuberculosis Case Management for Nurses: Self-Study Modules* also served as a basis in the development of the core competencies that follow. These modules integrate the core functions of public health with elements of the nursing process and activities of case management as they relate to the care of patients with tuberculosis.

TB nurse case management not only involves management services required for patient care and treatment, but also includes an array of public health activities to help prevent and control the spread of disease in the community which is the ultimate goal of TB nurse case management.

NURSE CASE MANAGEMENT WORKGROUP

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INTRODUCTION

I. Core Functions of Public Health

Assessment refers to systematic data collection, monitoring and providing information on the health of a community. As it relates to TB control, data are collected regarding the number of TB cases in a community and analyzed to measure the success of efforts to treat and control the occurrence of new cases.

Policy development refers to the provision of leadership in the advancement of rules and regulations that support the health of populations and utilizes scientific knowledge in decision-making regarding policy. TB control policies are related to the identification and reporting of people who have TB infection and disease, their treatment, and follow-up.

Assurance refers to the role of public health in making sure that essential health services are available community-wide, including a competent healthcare workforce in both the public and private sectors. In the treatment of tuberculosis, assurance addresses the issue of availability of appropriate TB services provided by personnel who are knowledgeable about TB, as well as ensuring that private healthcare providers are informed about the proper management of TB.

II. Elements of the Nursing Process

The nursing process is the problem-solving method used in nursing practice. Its holistic perspective serves as a tool for evaluating and improving care. In addition, it helps avoid duplications and omissions while contributing to comprehensive and consistent care.

Elements of the nursing process

- Assessment and diagnosis
- Planning
- Implementation
- Evaluation

Assessment is the systematic collection and analysis of data culminating in a nursing diagnosis. Assessment is the initial phase of the nursing process. It is a continuous aspect of the nursing process and involves collaboration with patients, caregivers, and healthcare providers who contribute to the patients' care. Conclusions are drawn regarding patients' needs, problems, concerns, or human responses.

The **planning** component of the nursing process involves the establishment of intervention strategies. In the planning process, it is necessary that all interventions include outcomes (criteria for evaluation) and a time frame for achievement.

The third phase of the nursing process is **implementation**, the execution and completion of nursing strategies identified in the planning phase. Implementation requires communication of the plan to all participants involved in the patient's care, including the patient and family.

Evaluation is the final, ongoing phase of the nursing process that documents both the patient responses and the extent to which the expected outcomes have been achieved. The nurse assesses the patient's progress using expected outcomes as criteria for evaluation.

III. Elements & Activities of the Nurse Case Management Process

- Case Finding
- Assessment
- Problem Identification
- Plan Development
- Implementation
- Variance Analysis
- Evaluation
- Documentation

For the TB Nurse Case Manager the focus of practice is the community and the effect of the community's health status on the health of individuals, families and groups. The TB Nurse Case Manager applies basic concepts of public health and is knowledgeable about social, economic, and ecologic issues related to the needs of populations at risk for TB. The TB Nurse Case Manager applies an advanced level of knowledge in the areas of medical and social sciences and is able to facilitate all aspects of TB care.

IV. Job Titles

- TB Nurse Case Manager
- TB Public Health Nurse
- Public Health Nursing Advisor
- Other categories as defined by local health jurisdictions

V. Competency Goals

- Identify TB program functions that describe or correspond to the role of nurses who provide care to patients with TB
- Identify the essential knowledge, skills, abilities and attributes of the TB Nurse Case Manager
- Facilitate the professional development and training of TB Nurse Case Managers

VI. Duties of the TB Nurse Case Manager (Model Duty Statement)

Tuberculosis Nurse Case Managers employ a case management model to accomplish TB-specific tasks in the following areas:

Domain 1: Assessment & Analytical Skills

Domain 2: Program Planning

Domain 3: Communication

Domain 4: Cultural Competency

Domain 5: Community Collaboration

Domain 6: Leadership

Core Competencies of a TB Nurse Case Manager

The section that follows describes the skills and knowledge needed to accomplish the functions listed in the model duty statement.

Domain 1: Assessment & Analytical Skills

The TB Nurse Case Manager is a qualified nurse who uses assessment and analytical skills to provide patient care, applying knowledge of tuberculosis as well as technical and public health skills.

Essential Background Knowledge & Skills

- State and local demographic profile, TB epidemiology, TB Program targets and outcomes
- Modes of TB transmission and pathogenesis of TB
- Differences between TB disease and LTBI
- Groups at risk for progression from latent infection to TB disease
- Testing for TB
 - Tuberculin skin test (TST) indications, administration, reading, interpretation, documentation, and reporting of adverse events
 - Indications for Interferon Gamma Release Assays (IGRAs) and interpretation of results
- Diagnosis of TB
 - Essential elements of a medical history
 - Diagnostic tests and results: sputum, drug susceptibility, bronchoscopy, chest radiograph, CT scans, HIV, and blood tests for liver function tests, CBC, and platelets
- Recommended treatment regimens for LTBI
- Recommended treatment regimens for TB disease
- Directly observed therapy (DOT) – definition and implementation
- Infection control in healthcare and community settings
 - Risk management
 - Isolation in least restrictive environment
 - Respiratory safety equipment
- Principles of contact investigation and interviewing skills
 - Establishing infectious period
 - Conducting a contact investigation
- BCG vaccination
- Community TB control
 - Reporting regulations
 - Appropriate use of legal interventions
 - Personal safety
 - Use of community resources

- Standards of documentation and patient confidentiality
- Clinic Operations
 - Evaluate eligibility for services
 - Ensure safe environment for nursing practice
 - Check environmental control monitors
 - Check emergency response materials
 - Maintain quality control logs (Lab logs, pharmacy logs)
- Documentation of nursing care including familiarity with electronic medical record-keeping and meaningful use provisions
- Technology tools (e.g. use of videophones, Skype and other tools for DOT)

Clinical Knowledge & Skills

- Perform Diagnostic Tests
 - Expertise in Mantoux Tuberculin Skin Test (TST)
 - Accurate, skilled placement and interpretation, and documentation
 - Ability to prepare and provide patient education
 - Expertise in using Interferon Gamma Release Assays (IGRA)
 - Skills in phlebotomy for blood sampling and processing/transport
 - Ability to prepare and provide patient education
 - Knowledge of other diagnostic tests and how to educate/prepare clients for tests
 - Chest radiograph
 - Computerized Tomography (CT) Scan
 - Sputum AFB smear/culture
 - Bronchoscopy
 - Drug assays
- Monitor Treatment for LTBI
 - Determine individual risk of progression of latent TB infection to disease
 - Provide monthly assessment to monitor medication side effects
 - Recognition and reporting of abnormal findings
 - Facilitation of patient referral for further evaluation
- Monitor Treatment for TB Disease
 - Provide monthly assessments to monitor medication side effects and laboratory test results
 - Recognition and reporting of abnormal findings
 - Assess barriers to adherence and need for DOT
 - Provide and/or supervise DOT
 - Keep track of number of doses taken and total doses required for treatment completion

- Evaluate response to treatment, documenting resolution of symptoms, weight gain, bacteriologic examinations and other clinical markers based on site of TB disease
- Monitor Effects of TB Treatment
 - Phlebotomy and processing/transport
 - Blood chemistry, liver function tests
 - Complete blood count
 - Hepatitis B and Hepatitis C
 - HIV testing, including patient counseling
 - Chest radiograph
 - Sputum smear/culture – education on collection, handling and transport
 - Conduct vision testing (Snellen and Ishihara)
 - Conduct audiometric testing

- Assess Barriers to Adherence

Assesses Patient Variables

- Psychosocial
 - Substance abuse
 - Mental disorders
 - Lack of support system
- Residential instability
 - Homeless
 - Corrections
- Past history of non-adherence
- Educational and literacy level
- Cultural health beliefs

Assesses Treatment Variables

- Duration of treatment for TB
- Adverse reactions
- Medication side effects
- Expense of treatment

Assesses Disease Variables

- Coexisting medical conditions

Assesses Organizational Variables

- Appointment schedule
- Availability of transportation
- Programmatic funding
- Legal considerations

- Patient rights vs. public health rights
- Implements strategies to improve adherence such as:
 - Individualized plan of care developed with input from the patient
 - Behavioral contract
 - Flexible treatment regimen
 - Provide incentives and enablers
 - Adherence devices
 - Pill box or watch with timer
 - Video or Internet DOT

Public Health Knowledge & Skills

- Knowledge of Contact Investigation Screening Guidelines
 - Risk Assessment – use communication skills and nursing knowledge to interview clients for history, risks and prevalent medical conditions
 - Congregate Living Facilities – provide case-finding and clinical services to eligible clients living in the following facilities:
 - Shelters
 - Group Homes
 - Long-term care facilities
 - Correctional and Detention Facilities
- Knowledge of TB Interview Techniques and Components of Contact Investigation
 - Conducts an initial TB Interview according to state/local standards
 - Uses communication skills and nursing knowledge to interview the patient to obtain:
 - previous history of TB or exposure to TB
 - signs and symptoms of TB disease
 - co-existing medical conditions
 - place of residence
 - place of employment or school
 - travel history
 - use of alcohol and/or illicit drugs
 - leisure activities
 - Establishes the infectious period
 - Collects information about the patient’s contacts in the household/residence, social/recreational environments, workplace/school, and other congregate settings
 - Conducts site investigations when necessary to determine risk of transmission
 - Prioritizes high, medium, and low risk contacts and identifies date that contact was broken
 - Provides education to individual and/or groups of contacts regarding TB disease, latent TB infection, and treatment
 - Conducts and/or facilitates evaluation of all contacts. This includes:

- TST or IGRA
 - Symptom assessment
 - Risk factor assessment
 - Provides follow up for all contacts placed on treatment for LTBI until completion
- Knowledge of Infection Control Guidelines
 - Determines level of patient's infectiousness
 - Adheres to criteria and requirements for provision of airborne Isolation
 - Applies and monitors environmental controls as needed
 - Uses respiratory protection (N95 respirator when indicated)

Domain 2: Program Planning

The TB Nurse Case Manager is a qualified nurse who uses knowledge of current guidelines and local epidemiology to effectively plan program-wide interventions.

- Knowledge of local, state, and federal laws and regulations
 - Monitors TB program operations to ensure compliance
 - Recommends legislative or administrative remedies or revisions to existing laws when needed based on scientific evidence, data, innovations in technology, and public input
 - Serves on advisory boards or committees to advise state or federal policy-makers and review proposed regulatory changes
- Ability to implement policy and program improvement
 - Uses leadership knowledge and skills to identify strengths and challenges for the organizations.
 - Contributes to organizational vision, mission, values, goals and smart objectives to develop activities
 - Solicits community and staff input for design of an effective program to meet local needs
 - Maintains knowledge of new, innovative and evidence-based programs
 - Uses logic models or other methodology to relate outcomes to program inputs
 - Uses results of evaluation to improve program activities
- Incorporates policy into organizational plans, structures, and programs
 - Integrates federal policies into local planning
 - Uses recommendations of CDC, NTCA and Regional Training and Medical Consultation Centers (RTMCC) to develop program structure
 - Addresses issues related to the synergistically interacting epidemics of TB, STD, viral hepatitis, HIV

- Develops strategies for continuous quality improvement
 - Uses National TB Performance Indicator (NTIP) performance monitoring system to measure achievement of program outcomes
 - Uses knowledge of research-based continuous quality improvement tools to understand challenges
 - Engages in regular meetings looking at processes and outcomes in a systematic manner
 - Establishes regular patterns of continuous quality improvement (CQI) audits, projects
 - Documents and communicate results of evaluation

Domain 3: Communication

The TB Nurse Case Manager is a qualified nurse who uses effective communication skills when interacting with patient, families, and healthcare providers. In addition, they should demonstrate effective oral and written communication skills, use communication strategies that build trust and rapport, and demonstrate a non-judgmental manner, in actions and communications with others.

Mutual Goal Setting

- Establishes mutual goals with the patient by identifying and prioritizing goals of treatment and care
- Develops a written plan with the patient to achieve anticipated goals
- Communicate anticipated time frames for achievement of goals
- Engages patient/family in the plan of care

Emotional Support

- Communicates acceptance and reassurance
- Demonstrates non-judgmental attitudes and behaviors
- Determines emotional barriers to treatment
- Provides on-going emotional support and encouragement throughout course of treatment

Patient Education

- Conducts an assessment to determine patient's readiness to learn, educational and literacy levels, their knowledge, attitudes and beliefs about TB
- Assesses the educational needs of healthcare providers (public and private), and community partners within the jurisdiction concerning the prevention and treatment of TB
- Defines gaps in educational materials

- Uses appropriate methods to prepare educational materials for persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and person of all ages and lifestyles. Tailors information to meet the needs of the target audience
- Determines how the individual's culture may influence communication including the use of facial expressions, gestures, and body language
- Disseminates TB educational materials in a variety of formats
- Recognizes and addresses misconceptions about TB disease, treatment, and prevention in preparing training/educational materials
- Uses appropriate language and language level while providing patient education
- Conducts patient education by:
 - Limiting the amount of information given at any one time
 - Providing an overview in the beginning and a summary at the end
 - Repeating important information
 - Encouraging the patient to ask questions
 - Utilizing available patient education materials
- Conducts patient education in an appropriate setting using adult and child learning theories to structure the process
- Incorporates the assistance of potential partners to assist in delivering the education
- Ensures that patients know:
 - TB is curable
 - How TB is transmitted
 - Difference between TB infection and TB disease
 - Disease prevented by treating LTBI
 - Importance and purpose of contact investigation
 - Contacts are at great risk for infection and disease
 - Convey message that "every TB case was once a contact"
 - Consequences of not starting treatment for LTBI
 - Confidentiality will be maintained
 - Public health staff will be available
 - Role, responsibility, and authority of the health department
- Communicates effectively by giving an accurate, consistent and clear message that is relevant to the intended audience

Domain 4: Cultural Competency

The TB Nurse Case Manager is a qualified nurse who demonstrates cultural awareness when interacting with patient and families from a variety of ethnic, religious, and cultural backgrounds.

- Demonstrates knowledge of the ethnic and cultural needs of the population being served

- Applies knowledge of how cultures define what is appropriate behavior during significant life events
- Identifies the gender roles and hierarchy in specific cultures
- Assesses language preferences and literacy levels
- Understands and learns what the experience of illness means to patients of a particular culture
- Applies knowledge of the role of cultural, social, and behavioral factors in determining the delivery of TB services
- Understand that different cultures have religious practices that limit physical contact with persons of the opposite sex
- Demonstrates knowledge of cultural traditions, beliefs, and religious holidays and the implications for taking tuberculosis medications during specific times of the year and work with patient to develop a DOT schedule that works for the patient
- Understands that many cultures have health practices that are unfamiliar to western medicine
- Understands that each culture has a unique perception of illness that will impact the patient-provider relationship
 - Is aware that personal space may have significance to specific individuals so that appropriate physical distance is established during interactions
 - Utilizes language line services in the language that is understood and spoken, recognizing there may be different dialects from one area or region
 - Realizes that some cultures cannot or do not verbally express gratitude or appreciation
 - Is sensitive to the individuals immigration history and its effect on the patient/provider relationship and adherence to treatment
 - Provides education in a variety of formats in the individual's language/dialect

Domain 5: Community Collaboration

The TB Nurse Case Manager is a qualified nurse who uses knowledge of community resources and stakeholders to foster partnerships within the community.

Collaboration with Partners

- Identifies key partners in the jurisdiction in which services are being provided
- Establishes a line of communication between partners
- Engages providers who are involved in the care of high risk populations
- Works together with stakeholders promoting a sense of responsibility and accountability to the needs of the community
- Builds strength in the partnership through the resources that are available, recognizing each partner has something unique to offer to the partnership
- Develops a list of stakeholders that partner with TB prevention and programs nationwide

- Has an awareness of current issues and topics related to TB and shares information with community partners
- Identifies upcoming conferences, lectures, and seminars and shares information with partners

Promotes Public Health Policy and Programs

- Knows the epidemiological profile of the program area as it pertains to TB
- Works together with partners in forming new policies and procedure's associated with TB prevention and control
- Applies knowledge of state and national TB guidelines when providing technical assistance concerning patient management issues
- Demonstrates knowledge of state and national guidelines for drug-resistant TB prevention, rapid diagnostic methods, references, and best practices
- Assists private provider to ensure that:
 - patient is on appropriate treatment and adheres to the treatment until completion
 - adverse events and drug side effects are reported and response to treatment is monitored regularly
 - patient completes treatment within recommended time frame
 - all aspects of treatment is documented and reported using appropriate jurisdictional forms

Provides consultation

- Provides expert advice to other healthcare workers who provide care to patients with TB disease or latent TB infection
- Intervenes to prevent and limit the transmission of TB
- Has oversight of investigations of contacts to persons with active TB
- Ensures evaluation and treatment for LTBI or TB disease if indicated to prevent TB in high-risk persons (contacts, persons with TB classifications for travel from pre-immigration/departure medical screening by panel physicians, person HIV+

Domain 6: Leadership

Nurse case managers use leadership theory to enhance the public's health and decrease the incidence of communicable diseases such as TB. They demonstrate the ability to use a shared vision, model excellence in public health nursing, overcome challenges through problem solving, enable action, and inspire others to act in the best interests of people and communities.

Leadership skills are based on an awareness of the National Public Health Leadership Institute competencies, the CDC Program Manager's competencies, and an understanding of legal and ethical perspectives.

Team Management

- Demonstrates ability to develop effective, harmonious teams with shared values and respect for all members
- Demonstrates knowledge of effective performance management and conflict resolution
- Engages, empowers and inspires team to action to meet shared goals
- Develops work groups and roles with team members in an effective organizational structure
- Translates vision and mission into measurable performance indicators for team ownership of outcomes
- Ensures ongoing training and education to improve team knowledge, skills and cultural competence

Evaluation Process

- Use NTIP to track program progress toward achievement of national TB program objectives
- Use existing data to help program prioritize activities and focus evaluation efforts
- Use TB-PEN to develop and strengthen the capacity of state and local TB programs
- Shares results of evaluation with stakeholders and team members

Quality Assurance

- Uses knowledge of continuous quality improvement (CQI) models to develop methodology to assess program quality
- Ensures that all team members participate in CQI activities to increase understanding and awareness of system and individual strengths and challenges
- Communicates results of CQI analysis with development of action plans for improvements
- Understands and implements cohort review
- Supports others in identifying cases for review
- Ensures that reports are submitted in a timely manner