



Case Management in Childhood TB

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“It takes a village to raise a child”

- **Same is true for Pediatric TB Case Management**
- **It takes a team to care for the child**



Team Members

- **Child and family**
- **Health care providers**
- **Pediatric radiologist**
- **Community based organizations**
- **Schools and daycares**



Team Work in Action



Even the Grinch is a team player!



Goals and Principles of Case Management

- **Providing quality health care along a continuum**
- **Coordinating care to reduce fragmented services across multi-disciplinary settings**
- **Enhancing quality of life**
- **Achieving anticipated outcomes**
- **Utilizing resources effectively**
- **Providing cost-effective health care**



Nurse Case Management = The Nursing Process

- **Assessment**
- **Plan development**
- **Interventions**
- **Evaluation**



Assessment – Definition

**Gathering objective and subjective data
from all possible sources:**

- At initial encounter
- During the contact investigation
- Throughout the child's course of TB treatment



Initial Assessment Activities

- **Ascertain extent of the TB illness**
- **Obtain and review child's health history**
- **Identify all contacts**
- **Evaluate knowledge/beliefs about TB**
- **Identify barriers or obstacles to adherence**



Evaluating & Managing High Risk Contacts

- **High-risk contacts**
 - Infants and children <4 years
 - Immunocompromised
- **Evaluation includes TB test, CXR, H&P**
- **Initiate treatment immediately even if evaluation and TB test are negative**
- **Repeat TB test in 8-10 weeks**



Three Generations





Initial Health History

- **Demographic data**
- **Diagnosis**
- **Test results**
 - TST/IGRA
 - HIV
 - Radiologic findings
 - Bacteriologic findings
- **Current prescription & non-prescription medications**
- **History of prior treatment for either LTBI or TB disease**
 - At a greater risk for drug resistance



Interval Patient History

- **Patient's weight to ensure appropriate medication dosage**
- **Review of systems**
 - For adolescents, include question about alcohol use, oral contraceptives, and LMP
- **History of present illnesses**
- **Assess for possible medication side effects**



Ongoing Assessment Activities

- **Monitor the clinical response to treatment**
- **Determine status of smear & culture results and sensitivities of index case**
- **Identify factors influencing adherence**
- **Determine unmet educational needs**
- **Identify barriers to treatment completion**



Assessing Adherence Barriers of Children & Adolescents

Adherence can be influenced by the child's:

- **Developmental level**

- Determine if developmental skills are age appropriate, especially those related to feeding/eating

- **Behavioral characteristics**

- Ask parent to describe usual behavior (easy to please, defiant, shy with strangers, fearful)



Assessing Adherence Barriers of Parents

Adherence can be influenced by parent's:

- **Parenting skills**

- Evaluate parent/child interactions

- **Understanding of medication side effects**

- Give written material and instruct to stop immediately if signs of toxicity or intolerance are noted

- **Personal health beliefs**

- Clarify misconceptions and explain benefits of treatment

- **Competing life circumstances**

- Recognize family strengths and build on them



Plan Development – Definition

Planning begins when sufficient information is gathered, and is based on the assessment and problems identified by all team members, including the patient and family



Plan Development – Activities

- **Establish the plan of care ensuring that all aspects of the assessment are included**
- **Monitor the plan of care and the child's response according to established time frames**
- **Choose age-specific strategies for adherence**
- **Negotiate a plan for DOT**



Age-Specific Strategies for Adherence

Age	Strategy
Infant (0 - 1 year)	Educate parent about the importance of treatment
Toddler (1-3 years)	Use distraction Give simple explanations Use incentives for each dose if necessary
Preschooler (3-5 years)	Give simple directions or explanations Allow child to have some choices – be consistent Offer verbal praise and rewards
School Age (5-12 years)	Discuss treatment plan with child Provide simple and accurate information
Adolescent (12-18 years)	Involve adolescent in decision-making Maintain confidentiality Provide rewards that are meaningful



Negotiate a Plan for DOT

- **Establish a plan for DOT while patient is in the hospital or at the first out-patient visit**
- **Discuss the plan with the child and family**
- **Modify the plan if non-adherence occurs**



Intervention – Definition

Activities that are required to move the child along a coordinated, sequenced health care continuum



Intervention – Activities

- **Implement your plan of care**
- **Removing barriers**
- **Refer to other health care providers**
- **Collaborating with community agencies**



Removing Barriers to Adherence – 1

General tips for administering medication

- Start off on a positive note – praise efforts
- Establish a routine - administer medication at the same time everyday
- Let child and parent choose what food or liquid to use
- Avoid distractions
- Ignore behaviors that interfere with administration
- Evaluate if gagging or spitting up





Removing Barriers to Adherence – 2

Tips for administering medication to children unable to swallow pills or capsules

- **Crush and mix with a spoonful of food**
 - Do not add gritty medication to food
- **Sprinkle contents of capsule on food**
- **Use smallest amount of food possible**
 - Should be able to combine 3 to 4 medications in 2 tsp. of food
- **Follow with plain food or liquid; vary the food used**
- **Schedule for a time when child is hungry**



Mother administering medication





Infusion Therapy





Evaluation – Definition

- An ongoing process that looks at outcomes of the interventions and informs future policy development
- Information obtained through evaluation can initiate operational research



Evaluation

- **Operational research (decision science) helps solve program problems**
- **Problem solving leads to action which will change policy, practice or management, resulting in improved health services**
- **Operational research can be undertaken by front line workers**



Lessons Learned

- Obtain history from appropriate source
- Remember that younger children rarely have symptoms
- Ensure that CXR is interpreted by an experienced radiologist
- Maintain a high level of suspicion if child is a contact
- Consider the need to disregard 1st 2 weeks of DOT



Treating TB Disease





Treatment Completion





Summary

- Your pediatric patient is not a small adult
- Flexibility will be your key to success
- Draw upon all resources, family and colleagues



A Challenge

Use data that is collected regularly to:

- Improve program**
- Initiate research**