

Tuberculosis and the complications of a Substance Abusing Client

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Tuberculosis is a leading cause of infectious morbidity and mortality worldwide.

OBJECTIVE I

Recognize the issues involved in managing a TB patient with an addictive personality or behavioral symptomology

Why is this important?

- **Prevention of TB**
- **Successful Intervention for TB**
- **Understanding of System Transformation for TB Containment worldwide**
- **Understanding of Policy, Practice, and Philosophy priorities in Care Coordination**

Kinds of Substance Abuse and Administration of Use

ATOD

Chemical substances

Administration of use

TYPES:

Alcohol | Tobacco | Other Drugs

ADMINISTRATION:

Oral | Smoking | Huffing | Snorting | IV Use*

Body Cutting

- transmission of bacteria, hygiene problems
- Immune System exposure – vulnerability

Co-Occurring Conditions

CO-OCCURRING CONDITIONS

- Complications of Trauma as contributor to early chemical use and abuse
- Toxic Stress Impact
- Adaptation in Brain Development
- Other types of addictions

Understanding the Addictive Personality

Identify the Common Bio-psych-social Factors in the Addictive Personality

- Traits
- Habits

Understanding
the
Addictive
Personality,
Cont.d

*Recognition of the issues involved in
managing a TB patient with
concurrent chemical abuse problems:*

- Overwhelming stress re: monoamine production/interruption
- Adaptive impact on brain development – neural re-set regarding reward system
- Overwhelming loss – Placement in lifecourse

Understanding the Addictive Personality, Cont.d

- Drug Use Complications – Liver health, Lung Health
- Treatment Adherence
- Self Medication
 - Wanting to feel better – Adversely impacts the consistent regimen of TB care
 - True Self to False Self Bx
 - Manipulation, Self-Soothing, Shame, Delayed Executive Functioning

OBJECTIVE II

Identify the barriers to adherence in the substance abusing population and ways to promote adherence

Diagnosis and Testing for TB – Similarities between symptoms of TB and SUD

- The symptoms of TB disease (active pulmonary or lung TB) Cough of 3 weeks or more
- Cough productive of mucous which is bloody or pus like
- Malaise
- Night sweats (high fever at nighttime – may not be present if patient is immunosuppressed)
- Weight loss
- Chest pain
- Appetite loss
- Chills

Transmission

M. tuberculosis is spread by droplet nuclei or aerosolization of the bacilli in airborne particles of respiratory secretions

Particles are expelled when a person with infectious TB coughs, sneezes, speaks or sings. There is increased transmission in smoking (cigarettes, crack and/or marijuana) from associated coughing

TB with cavities (holes caused by the bacilli eating away surrounding tissue) in the lung is the most infectious

Close contacts are at highest risk of being infected.

Probability that TB will be transmitted is primarily based on:

1. Infectiousness of the person with TB

2. Duration of exposure

3. Hardiness of the bacilli

4. Environment in which exposure occurred

Certain medical conditions increase the risk that TB infection will progress to TB disease

Risk of developing TB disease if already HIV positive is 7 – 10% per year

TB Treatment Complications

- Executive Functioning diminished
- Unacceptable interactions if HIV/AIDS patient
- Monitoring treatment – monthly visits, 12 month treatment periods for HIV positive individuals
- Drinking alcoholic beverages while taking anti – TB medications, especially INH, can be dangerous
- Patients with HIV/AIDS have a high prevalence of extrapulmonary disease 60 – 80% in the HIV positive patient vs. less than 18% in the normal adult population

- TB medications are usually metabolized by the liver, *which can be damaged by substance abuse.*
- "Our results suggest that substance abuse is the *most commonly reported modifiable behavior impeding TB elimination efforts* in the United States," John E. Oeltmann, of the U.S. Centers for Disease Control and Prevention, and colleagues, wrote in a news release from the journal. (emphasis added) (*Archives of Internal Medicine*, Jan 26, 2009)

Evidence to directly link risk for TB with crack cocaine use is lacking, although an association with tuberculin positivity has been shown.

Increased exposure risk is considered largely attributable to social and lifestyle factors including homelessness, imprisonment, and drug and alcohol abuse.

Drug users are commonly immunocompromised through HIV infection and malnutrition, resulting in increased risk for TB infection and rapid progression to active disease.

- Habitually smoking crack cocaine causes pulmonary damage (crack lung) Consequently, alveolar macrophage function and cytokine production is impaired, which may enhance susceptibility to infectious diseases.
- Several pulmonary complications are associated with the inhalation of crack cocaine (e.g., intensive cough, hemoptysis, shortness of breath, chest pain, acute bilateral pulmonary infiltrates, thermal airway injury, pneumothorax and noncardiogenic pulmonary edema, production of carbonaceous sputum, and exacerbation of asthma). Collectively, these complications have been reported as crack syndrome.
- Compromised lung and heart health leave individual susceptible to contraction of TB

Primary Health and AOD Treatment Programs

AOD Programs should and could:

- Provide purified protein derivative (PPD) skin testing for all high risk patients
- Refer all persons with HIV infection
- Become aware of all close contacts of persons with infectious TB
- Refer patients with chronic diseases such as diabetes and silicosis
- Refer persons who inject drugs
- Refer recent immigrants from areas where TB is common
- Consider those that are medically underserved
- Refer residents of long – term care facilities
- Work with homeless program services

WHO

- We have to stop people living with HIV from dying of tuberculosis," said Mr Michel Sidibe, Executive Director of UNAIDS. "Universal access to HIV prevention, treatment, care and support must include TB prevention, diagnosis and treatment. When HIV and TB services are combined, they save lives."

TB/HIV co-infection and drug-resistant forms of tuberculosis present the greatest challenges, the report says. In 2007 an estimated 500 000 people had multidrug-resistant TB (MDR-TB), but less than 1% of them were receiving treatments that was known to be based on WHO's recommended standards.

- "We have made remarkable progress against both TB and HIV in the last few years. But, TB still kills more people with HIV than any other disease," said Dr Michel Kazatchkine, Executive Director of the Global Fund to Fight [AIDS](#), Tuberculosis and Malaria.

Substance Abuse and Mental Illness

Describe the impact Mental Illness has on Substance Abuse and the management of the TB patient

- **Mental Illness contributing to Substance Abuse**
- **Trauma contributing to Substance Abuse**
- **Conducting a mh/sud assessment**
- **General case management ideas of the TB patient with mental illness and substance abuse**

Behavioral Implications

What is Happening?	What it can cause....
Hyper vigilance	Hard to calm down – Diminished Executive Function
Routinized Defense	Prepared to Fight – quick to anger or defense Overly aware of your surroundings
Externally in tune with environment	Less in tune with self, your needs, your body clues, and your impact on others
Survival Skills the strongest	Quick to make assumptions about others – Barrier to trust
Self Loathing, Self target of blame and shame. What is wrong with me? Instead of What is happening to me?	Victim thinking - Loss of personal accountability
Tendency to re-enact painful episodes (tethered to your past)	Tendency to create a drama where there is not one
Quick criticism, resolute judgment	Resentment and bitterness

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THANK YOU!

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