Strategies for Maximizing Treatment Initiation and Completion for Persons with TB Infection

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Leading the Horse to Water
Faculty Disclosure

I wish to acknowledge that I have no commercial or vested interests or relationships to report.

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Objectives

- Identify factors to consider when choosing treatment regimens for TB Infection
- Discuss potential factors influencing treatment initiation and completion for persons with TB Infection
- Identify barriers to treatment initiation and completion
- Identify strategies in supporting persons with LTBI Treatment
Targeted TB Testing and Treatment of Latent TB Infection

- As TB disease rates in the United States decrease, finding and treating persons at high risk for latent TB infection (LTBI) has become a priority.
- Targeted TB testing is used to focus program activities and provider practices on groups at the highest risk for TB.
- Treatment of LTBI substantially reduces the risk that persons infected with \textit{M. tuberculosis} will progress to TB disease.

Acceptance vs. Adherence
Understanding the difference

- Acceptance reflects the persons consenting to receive or undertake something offered i.e. treatment, evaluation, testing
- Adherence follows recommendations provided by keeping appointments, treatments resulting in completion of therapy
Acceptance vs. Adherence

- Can be dependent on the treatment of active disease vs. TB infection
  - Persons with active disease are more likely to be adherent because of severity of illness and fear of spreading TB
  - More at stake for a person with stronger risk factors
- Acceptance will largely be dependent on how the provider presents the information to the patient
  - If the provider is not invested in treatment, information might not be presented in convincing way to the patient
- Adherence may be more successful with various supports during treatment to keep the patient engaged

Treatment for TB Infection

A full course of antibiotics is needed to clear a TB infection
### Factors that Influence Regimen Selection

#### Clinical Considerations
- Drug-susceptibility results of source case if known for identified contacts
- Co-existing medical illness or condition
- Potential for drug-drug interactions
- Weighing the risks vs. benefits of treatment

#### Other medical considerations
- Pregnancy or planned pregnancy
- Persons with liver disease and potential hepatotoxicity
- Persons on oral agents for Diabetes and possible medication interactions
- Persons with HIV/AIDS
### Factors that Influence Regimen Selection

#### Age
- 3HP is only currently prescribed for persons aged 12 and older
- Need for modified medication constitutions such as liquid vs. tablets in younger patients
- Older persons may not do well on some regimens because of the high doses of medication with other medications.
- Other medical issues/medical concerns/possible contraindications with older persons

#### Acceptance/Adherence
- Mobility - including travelers, college students, correction inmates, homeless persons
- For some who require Direct Observation Therapy (DOT) visits can interfere with work, school or personal scheduling
- May require lifestyle changes such as birth control or limiting alcohol use
- Ensuring completion of therapy to prevent future drug resistance
Choosing a Regimen for TB Infection

General factors in choosing regimens
- Cost
- Insurance
- Treatment settings
- Patient choice
- Likelihood to complete therapy

Barriers to Treatment
- Acceptance of treatment might be high however treatment completion low due to length of therapy
- Patients do not feel they are at risk for progression to active disease
- Patient concern about side effects from medications
- Do not like taking medications for any reasons
- TB treatment is not a priority
- Don’t feel sick
- BCG Vaccination
### Treatment Acceptance – Who does not?

- Factors determining acceptance of treatment and adherence can be identified at the first visit
- Health Care Workers are more likely to decline LTBI treatment
- Those who were recommended treatment in the past and declined were less likely to accept treatment again
- Those who did not feel they were at risk or felt clinic schedules were inconvenient were less likely to accept treatment
- Those concerned for invasive procedure such as venipuncture

### Treatment Acceptance – Who does?

- Those who felt they could spread to others
- Contacts to active cases
- Individuals with reported problematic substance use
- Those with increased TB knowledge acceptance of demands of therapy such as clinic visits, medications
- Non-US born individuals with low acculturation
- Those starting treatment for TNF inhibitors or in preparation for organ transplant
- Combining treatment with other treatments where peer support or witness doses are used such as methadone clinics, HIV care
Strategies for Treatment Initiation and Completion

- Target high risk groups including health care workers, those previously recommended for treatment, non-US born persons and those in corrections and shelter settings
- Provide easy to understand education on TB Infection
- Offer shorter regimens for eligible patients such as 4 months of Rifampin or 3HP
- Offer flexible clinic schedules
- Receive treatment by primary care provider
- Use of other clinical providers for DOT such as pharmacists (3HP)

Patient-focused Materials
Strategies for Treatment Initiation and Completion cont.

- Engage partners to support treatment in occupational or school settings
- Direct Observation Therapy for high risk populations
  - Children
  - Contacts to MDR Cases
  - B Arrivals

Strategies for Treatment Initiation and Completion cont.

Social Interventions
- Incentives including cash, vouchers, transportation
- Cultural and language appropriate materials
- Education, peer counseling, groups
- Reminder by telephone calls or text messages
Personal Touch

- Discuss risk and benefits of treatment
- Provide routine follow-up calls by clinical staff
- Provide ongoing support and encouragement during therapy
- Demonstrate ongoing investment in the patient’s therapy completion
- Provide written completion of therapy letter

And those that do complete

- Gratitude to the clinic staff
- Treatment not accessible in their home country
- Presented his own painting as a gift to the clinic
References

- Predicting Non-Completion of Treatment for LTBI
- Latent TB Infection Acceptance and Completion in The US and Canada
- Acceptance of treatment for LTBI: prospective cohort Study in the US and Canada
- Interventions for improving adherence to treatment for LTBI: a systematic review
  - *BMC Infectious Disease* 2016 15:257

References

- Efficacy and completion Rates of rifapentine and isoniazid (3HP) compared to other treatment regimens for LTBI: a systematic review with network meta-analyses
  - *BMC Infectious Disease* 2017 17:265
- Promoting adherence to treatment for LTBI through mobile phone text messaging: study protocol for a pilot randomized control trial
  - *Pilot and Feasibility Studies* 2017 3:15
- Treatment Completion for LTBI: a retrospective cohort study comparing 9 months or INH, 4 months RIF, and 3 months 3HP
  - *BMC Infectious Disease* 2017 17:146
## Resources

- [https://www.cdc.gov/tb/publications/pamphlets/12doseit bitreatmentbrochure8.5x11.pdf](https://www.cdc.gov/tb/publications/pamphlets/12doseit bitreatmentbrochure8.5x11.pdf)