Compliance for Latent Tuberculosis Infection Treatment among Incoming Refugees at Jefferson Center for Refugee Health

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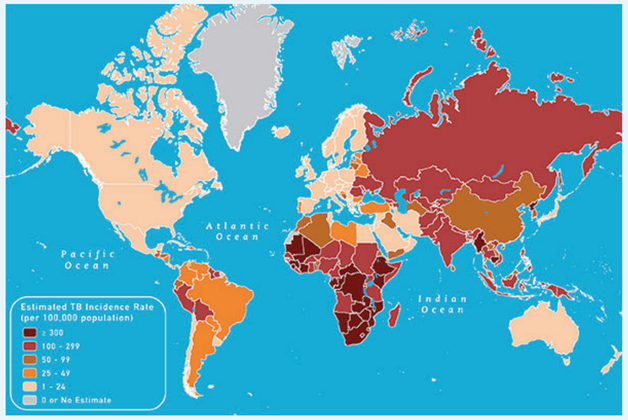
ABSTRACT

80% of active TB cases in the US originate from reactivation of Latent Tuberculosis Infection (LTBI), identifying treatment of LTBI as a public health imperative. All incoming refugees at the Jefferson Center for Refugee Health (JCRH) are screened for LTBI upon arrival. Incidence of LTBI and compliance rates were assessed using a retrospective chart review and analysis of prescription refill records. The study showed 23.1% of incoming refugees were diagnosed with LTBI. Once treatment was initiated, only 33.1% were completed, while 56.2% were lost to follow up. Nepali women showed the highest rates of adherence, while Iraqi women and Burmese men were least likely to complete treatment. This data suggests a need for novel interventions to improve compliance

INTRODUCTION

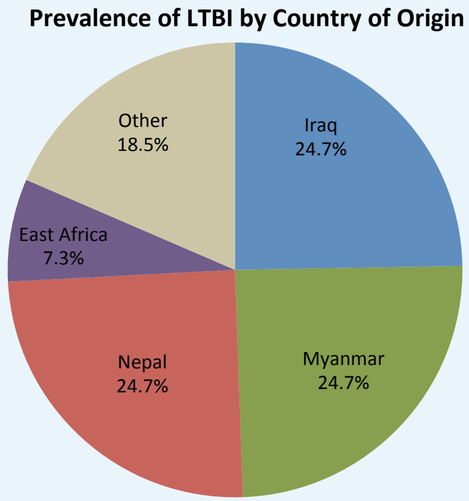
According to the WHO, more than a third of the world's population is infected with Latent Tuberculosis Infection. 5-10% of these patients will develop the active disease. Domestically, the foreign born are disproportionately affected by LTBI at rates 12-27 times higher than those of US born. Highest risk of reactivation is seen among newly infected individuals, and those from TB endemic areas. From 2007-2011, JCRH treated incoming refugees from around the world, including highly endemic areas, such as Nepal, Myanmar, and East Africa. This presents an at-risk population for LTBI and reactivation of TB.



METHODS

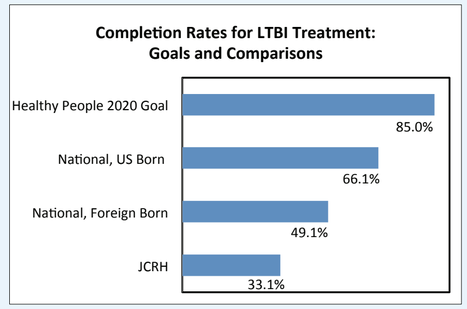
- Retrospective Chart Review of incoming refugees to JCRH, from Sept. 2007-Dec. 2011 (n=760).
- LTBI diagnosis defined as a positive Quantiferon assay or positive Tuberculin Skin Test.
- Pharmacy outreach performed to assess treatment compliance, determined by number of refills obtained, confirmed by pharmacists.
- Refill information was obtained on 143 patients, utilizing six participating local pharmacies.
- Data analyzed using SPSS.

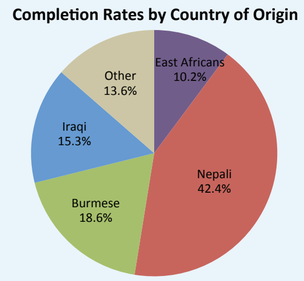
RESULTS



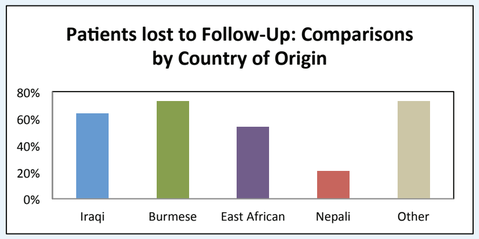
- 23.1 % of incoming refugees are diagnosed with LTBI.
- Most cases of LTBI were centralized in South and North Philadelphia, evenly split between Iraqi, Nepali and Burmese patients.
- Treatment Completion: 33.1%
- Mean age of patients who completed treatment: 33.5 years.
- Mean Cycles Completed: 5/9 for INH, 3/4 for RIF.
- Once treatment was initiated, Nepali Women showed highest rate of completion, 53.8% (n=26).

RESULTS





- Iraqi women showed the lowest rate of completion, with 10% (n=20), followed by Burmese men, of whom only 20% completed treatment.
- 56.2% of patients diagnosed with LTBI at JCRH were lost to follow up, with Burmese and Iraqi patients most likely to discontinue care.



CONCLUSION

While rates of completion demonstrate an opportunity for improvement, this data may be utilized as a baseline to develop novel interventions. Further study should identify barriers to compliance and health access for refugees in Philadelphia. This study may have implications for chronic disease management among refugees. suggesting limited pharmacy utilization for prolonged treatments.

REFERENCES

1.Colson, Paul W, Franks, J., Sondengam, R., Hirsch-Moverman, Y., & El-Sadr, W. (2010). Tuberculosis Knowledge, Attitudes, and Beliefs in Foreign-born and US-born Patients with Latent Tuberculosis Infection. Journal of Imigrant and minority health/ Center for Minority and Public Health,12(6), 859-66.

2.Munro SA, Lewin SA, Smith HJ, Engel ME, Fretheim A, Volmink J. (2007). Patient adherence to tuberculosis treatment: a systematic review of qualitative research. PLoS Med, 4(7), :e238

3.Yun, Fuentes-Afflick, E, Desai MM. (2012) Prevalence of Chronic Disease and Insurance Coverage among Refugees in the United States. Journal of Immigrant and Minority Health. Epub ahead of print.

4.Greenaway, C., Sandoe, A., Vissandjee, B., Kitai, I. Gruner, D. Wobeser, W., Pottie, K t. Al(2011) Tuberculosis: evidence review for newly arriving immigrants and refugees. CMAJ: Canadian Medical Association Journal, 183 (12), E939-51. Retrieved from: http://www.cmaj.ca/content/183/12/E939.long

5.C Horsburgh, Jr. (2011) " Latent TB infection in the United States, NEJM, 364:15