Background

- Approximately 5–10% of patients infected with Mycobacterium tuberculosis, a bacteria known as latent tuberculosis infection (LTBI), will eventually develop active tuberculosis (TB) disease.
- Treatment of patients with LTBI is an important strategy for preventing progression to TB disease.

Objective

- To describe the risk of not completing treatment and associated characteristics in patients receiving 12 weekly, directly observed doses of isoniazid and rifapentine (INH-RPT) for LTBI treatment.
- To determine treatment discontinuation rates, and factors associated with discontinuing treatment.

Methods

- A prospective observational cohort of patients diagnosed with LTBI at 15 sites enrolled in a treatment study on INH-RPT between July 1, 2011, and December 31, 2013.

Results

- There were no reported deaths during treatment.
- 1.38 (1.11, 1.72) patients started the regimen. 3307 were eligible to complete; of whom, 2842 completed treatment (85.8%).
- Of the 465 patients who were HIV-infected on anti-retroviral treatment, contacts of a TB patient having drug-resistant TB disease, diagnosed with active TB within the prior 12 months, or a negative quantity nucleic acid amplification (QNA-NAAT) test result were not eligible to treatment with INH-RPT and were excluded from analysis.
- Of the 365 eligible patients, 210 (57.4%) discontinued treatment, 44 (12.0%) had treatment success, 79 (21.7%) had treatment failure, 22 (6.0%) had other outcomes, and 8 (2.2%) were lost to follow-up.
- Nausea was the most commonly reported symptom (Figure 4).
- The rate of discontinuation treatment increased with age (Figure 2).
- The risk of discontinuation was greater for persons experiencing homelessness in the prior 12 months (ARR=1.71; 95% CI: 1.23-2.37), aged ≥ 65 (ARR=1.52; 95% CI: 1.11-2.04), or incarcerated in the prior 12 months (ARR=1.22; 95% CI: 1.03-1.43), or had a history of having been treated for TB (ARR=1.14; 95% CI: 1.1-1.75).
- Patients having recent contact with an infectious TB patient (ARR=0.69; 95% CI: 0.56-0.86) or students (ARR=0.41; 95% CI: 0.21-0.81) were more likely to complete treatment.

Conclusions

- The use of directly observed INH-RPT to treat LTBI resulted in a low treatment discontinuation rate (13%).
- Homeless persons, older adults, persons with history of incarceration, and smokers were at a greater risk for discontinuation of LTBI treatment. Nevertheless, treatment completion rates in these subpopulations were high.