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Infectious Disease Provider Perspectives on Shorter Tuberculosis Treatment Regimens

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Introduction

- CDC guidance has prioritized shorter regimens for latent TB infection (LTBI) since 2020.
- Since 2022, recommendations for drug-susceptible (DS-TB) disease include 4 months of high-dose rifapentine, isoniazid, moxifloxacin, and pyrazinamide (HPMZ) and for drug-resistant (DR-TB) disease prioritize 6 months of bedaquiline, linezolid, and pretomanid +/- moxifloxacin (BPaL/BPaLM).
- Yet practice often lags behind guidelines.

Aim/Goal

To characterize TB treatment practices of ID physicians and identify barriers to using shorter regimens.

Methods

- A survey about TB treatment was distributed to 1501 US adult ID physician members of the IDSA Emerging Infections Network.
- Hypothetical case scenarios were used to elicit treatment preferences for latent TB infection, DS-TB, and DR-TB.
- Descriptive data analyses were performed using Excel.
- Comments were qualitatively analyzed.

Results

Use of newer regimens for DS-TB disease is low, due to concerns about effectiveness & toxicity.

Table 1: Demographics (n=349)

Characteristic	No. (%)
Adult ID Physicians	349 (100)
Region	
Northeast	73 (20.9)
Midwest	93 (26.6)
South	96 (27.5)
Pacific	86 (24.6)
Years experience since infectious disease fellowship	
<5 years	74 (21.2)
5-14 years	122 (35.0)
15-24 years	71 (20.3)
>25 years	82 (23.5)
Primary Practice Setting	
City/county	19 (5.4)
Community	88 (25.2)
Non-university teaching	81 (23.2)
Outpatient only	2 (0.6)
University	134 (38.4)
Veterans Affairs Medical Center or Department of Defense	25 (7.2)
Patients with latent tuberculosis infection seen in an average year	
<1	21 (6.0)
1-10	172 (49.3)
>10	156 (44.7)
Patients with tuberculosis disease seen in an average year	
<1	104 (29.8)
1-10	210 (60.2)
>10	35 (10.0)

Figure 1: How would you preferentially approach treatment of latent TB infection?

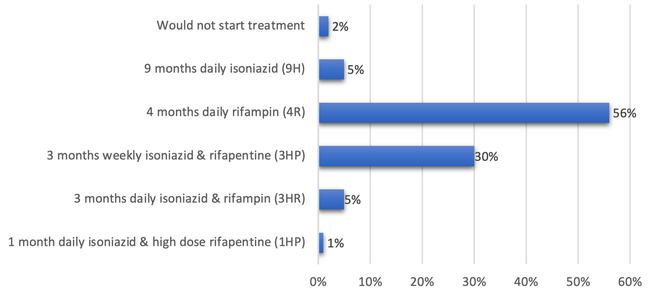
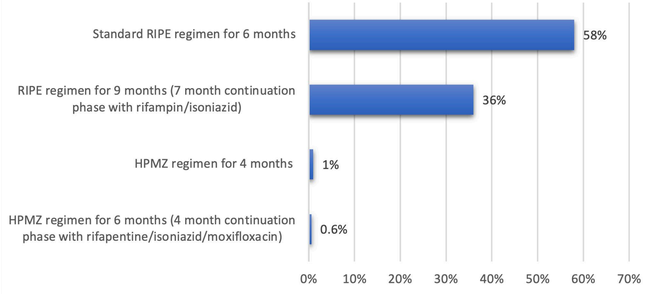
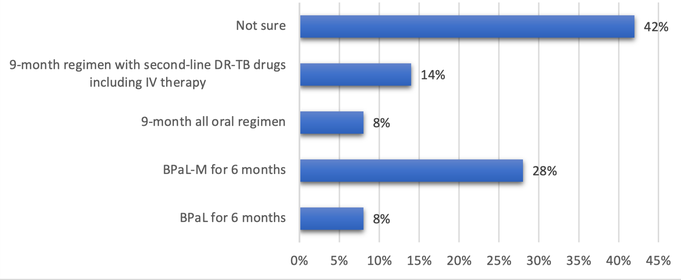


Figure 2: Which regimen do you typically choose for a patient with cavitary DS-TB?



- 93% (n=324) preferentially opted for CDC-recommended shorter regimens for LTBI, with only 12% (n=42) expressing concerns with treatment effectiveness.
- 1% (n=5) selected HPMZ for pulmonary DS-TB. When asked about experience using shorter regimens, only 5% (n=19) reported that they had used HPMZ.
- For confirmed DR-TB, 36% (n=127) would use BPaL or BPaL-M, and 42% (n=146) were unsure.

Figure 3: If resistance to rifampin and isoniazid, and susceptibility to fluoroquinolones are confirmed, which regimen would you use?



- When asked about concerns with using shorter regimens for TB disease, 43% (n=145) were uncertain about the effectiveness of shorter regimens for DS-TB and DR-TB.
- Qualitative analysis highlighted barriers to the use of shorter regimens for TB disease:
  - *Treatment toxicities* related to HPMZ or linezolid-based DR-TB regimens
  - *Medication interactions* including antiretroviral treatment
  - *Availability* of rifapentine and bedaquiline.

Conclusions

- ID physicians prefer shorter LTBI regimens.
- However, use of shorter regimens for TB disease, especially 4-months of HPMZ, is low, due to concern about effectiveness and treatment toxicities.
- Shared decision making with patients can help balance trade-off between the benefits of shorter regimens with enhanced management of toxicities.