

An Audit of Latent Tuberculosis Treatment Over a One-Year Period in the Infectious Diseases Department at Beaumont Hospital

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AIM

- To review all patients with a new diagnosis of latent tuberculosis infection (LTBI) seen in the Infectious Diseases Clinic at Beaumont Hospital between 1st January and 31st December 2023.
- Provide a descriptive analysis; assess standards of care; and compare this data to previous audits.

BACKGROUND

- One quarter to one third of the global population is estimated to be infected with *Mycobacterium tuberculosis*.¹ Most of these infections are LTBI, where the bacteria remain dormant in the body, but may reactivate in the future. Approximately 10-15% of those with LTBI will progress to active disease at some point in their lives.^{2,3}
- Treatment of LTBI is effective in preventing progression to active TB.^{4,5}
- The Health Protection Surveillance Centre recommends treatment for selected cohorts of patients in Ireland which concurs with other international guidelines from the World Health Organization and Centre for Disease Control.^{6,7,8}
- We were interested in assessing the current treatment practices for LTBI in our centre, and how this compares to international treatment standards, as well as providing a descriptive analysis of this cohort of patients.

STANDARDS

We audited current practice against standards as set out in both national and international recommendations:

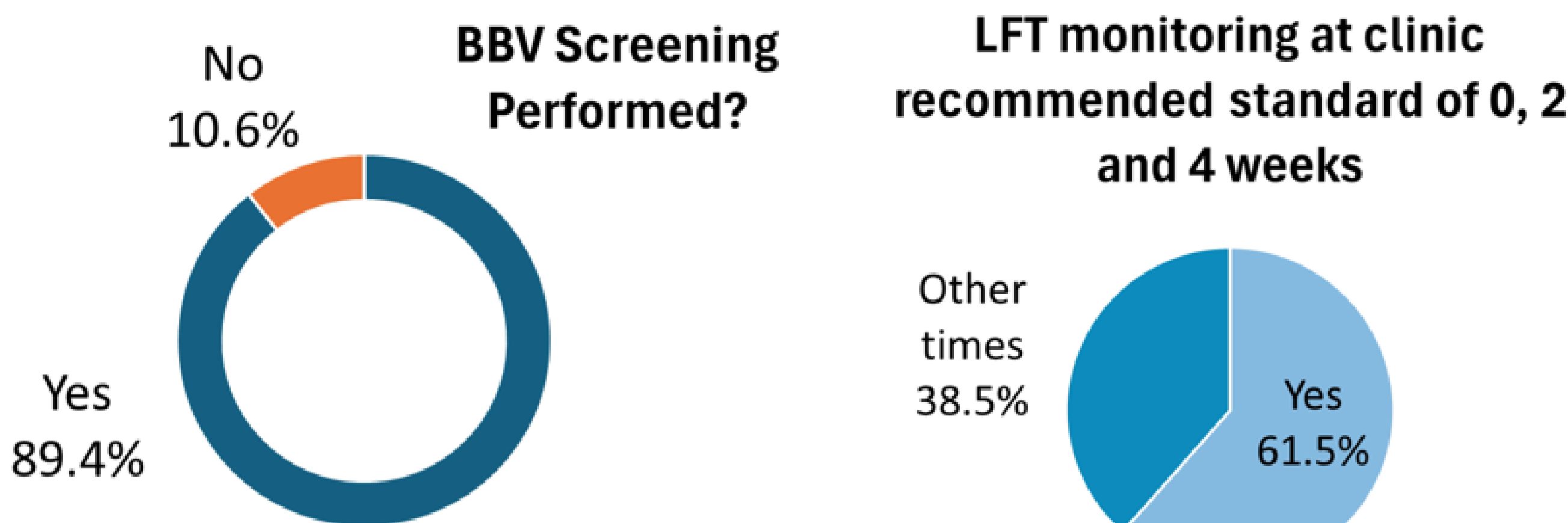
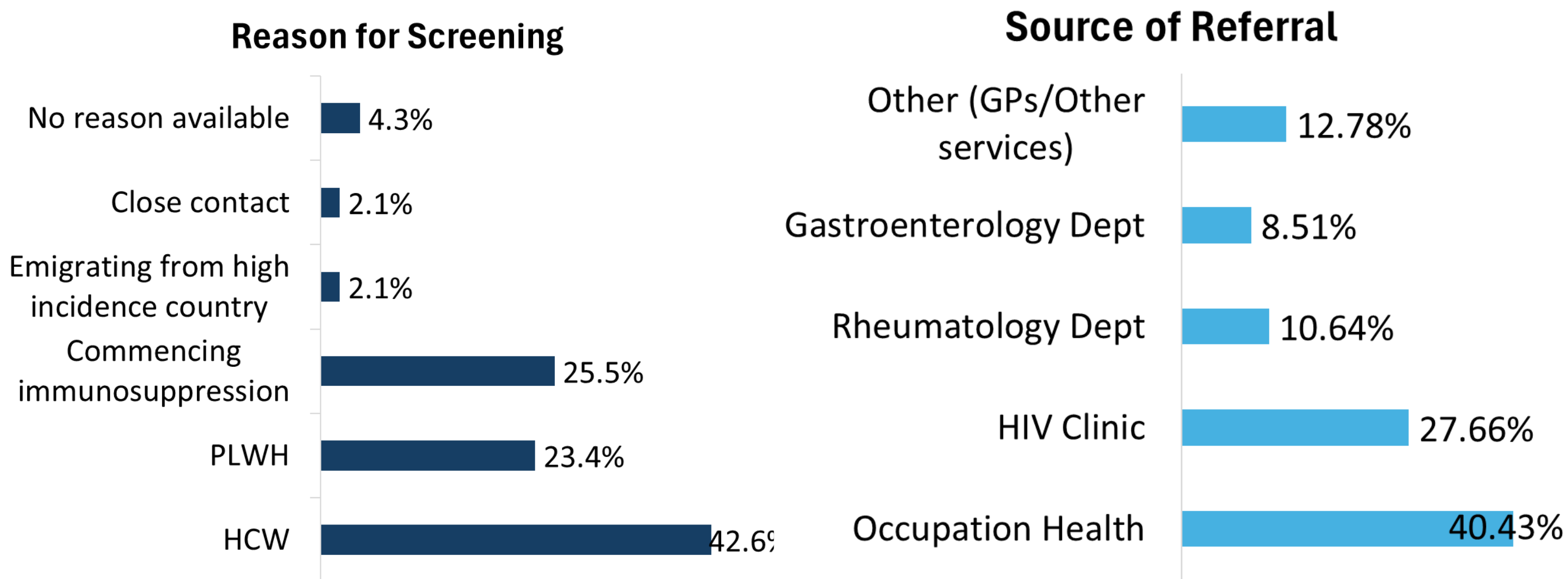
- Management of latent TB infection, Health Protection Surveillance Centre (HPSC) Guidelines on the prevention and control of Tuberculosis in Ireland; 2010.⁶
- Latent tuberculosis infection: updated and consolidated guidelines for programmatic management. Geneva: World Health Organization; 2018.⁷
- Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020.⁸

METHODOLOGY

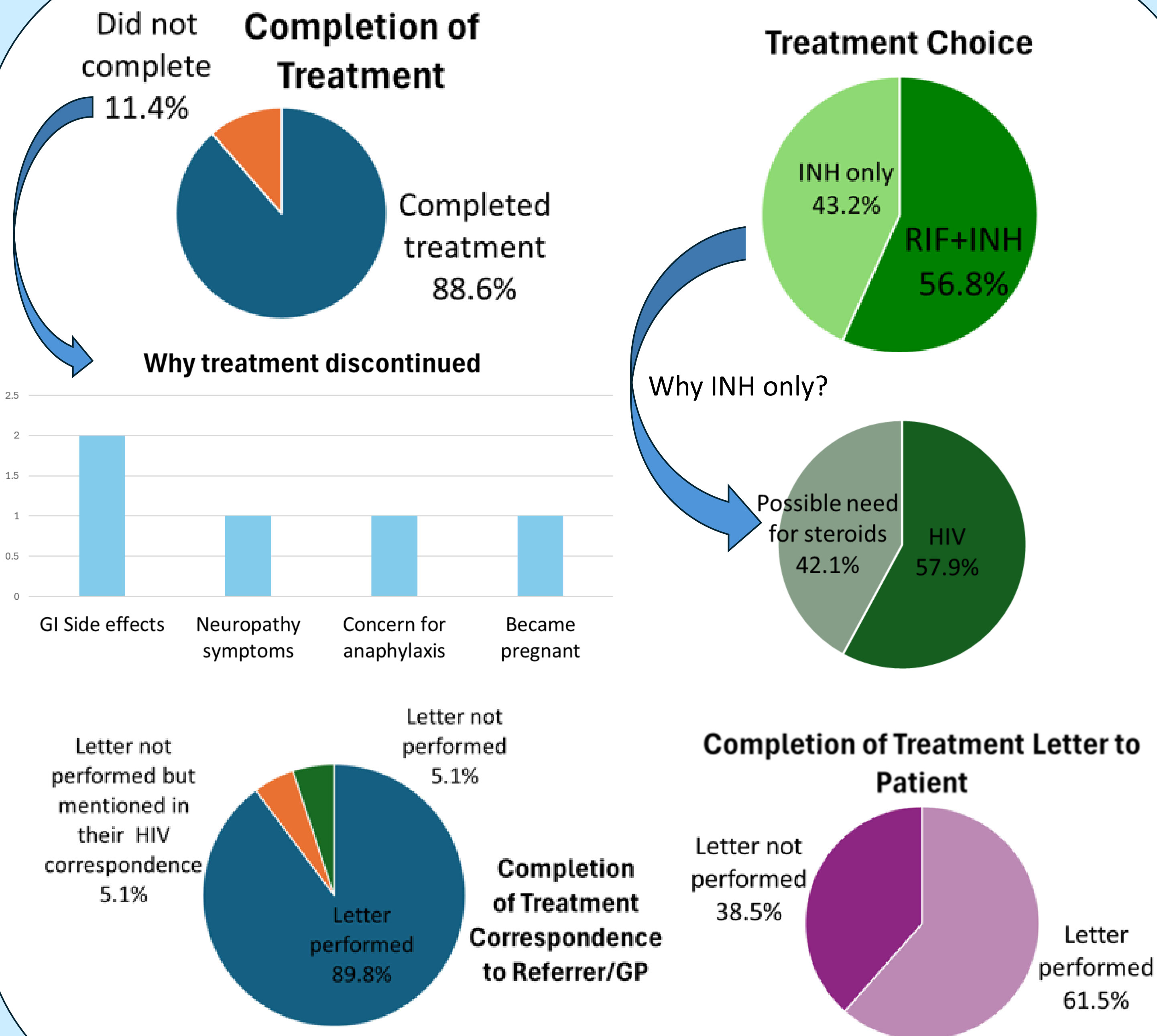
- We performed a retrospective analysis of all patients given a diagnosis of LTBI between 1st January and 31st December 2023 and assessed through the Mycobacterium Clinic and HIV Clinic at Beaumont Hospital.
- Patients were identified via the LTBI hospital database, and clinical details reviewed using the hospital electronic patient record system.

RESULTS

- 47 patients were given a diagnosis of LTBI



RESULTS



CONCLUSION

- There was strong adherence to international guidance where Rifampicin-based-regimens are preferred:
 - Rifampicin/Isoniazid remained the treatment of choice, though slightly less than 2021-2022 figures (56.8% vs 62%).
 - Where Rifampicin-based-regimens were not used, there was a valid reason for alternative therapy.
- The total rate of treatment completion for this cohort is 88.6%. This compares favorably with data from 2018 (81%), and 2021-2022 (85.9%).
- Only 9.09% reported AEs and discontinued their treatment. All of these AEs were felt to be minor and patients were offered to continue treatment though declined same.
- All patients diagnosed with LTBI, for whom data was available, had a valid diagnosis for screening for LTBI as per national and international guidelines.
- Unfortunately, there were several patients where a BBV screen was not performed (10.6%) and many patients where the clinic standard of LFTs at 0, 2 and 4 weeks was not conformed to.
- Most patients had a Completion of Treatment Letter sent to their referrer or GP. However, only 61.5% of patients had a similar letter copied to themselves for their own records. While this is not a necessity as per any guideline, good practice would suggest notifying all relevant stakeholders (GP/Occupational Health Physician/Public Health Physician/patient themselves) of completion of treatment for LTBI.

RECOMMENDATIONS AND ACTION PLAN

- Review ongoing compliance to BBV screening, and adherence to the clinic standard of testing LFTs at 0, 2 and 4 weeks to be encouraged.
- Encourage all clinic staff to ensure Completion of Treatment Letters sent to all relevant stakeholders involved in the patient care.
- At next audit period, to assess volume of referrals seen in clinic from jurisdictions or clinics outside of Beaumont Hospital.
- Regular auditing of the LTBI clinic to ensure ongoing compliance to international and national standards.

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4. Horsburgh CR Jr, Rubin EJ. Latent tuberculosis infection in the United States. *N Engl J Med* 2011;364:1441-8.
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