



Tuberculosis in Ireland: provisional trends in surveillance data

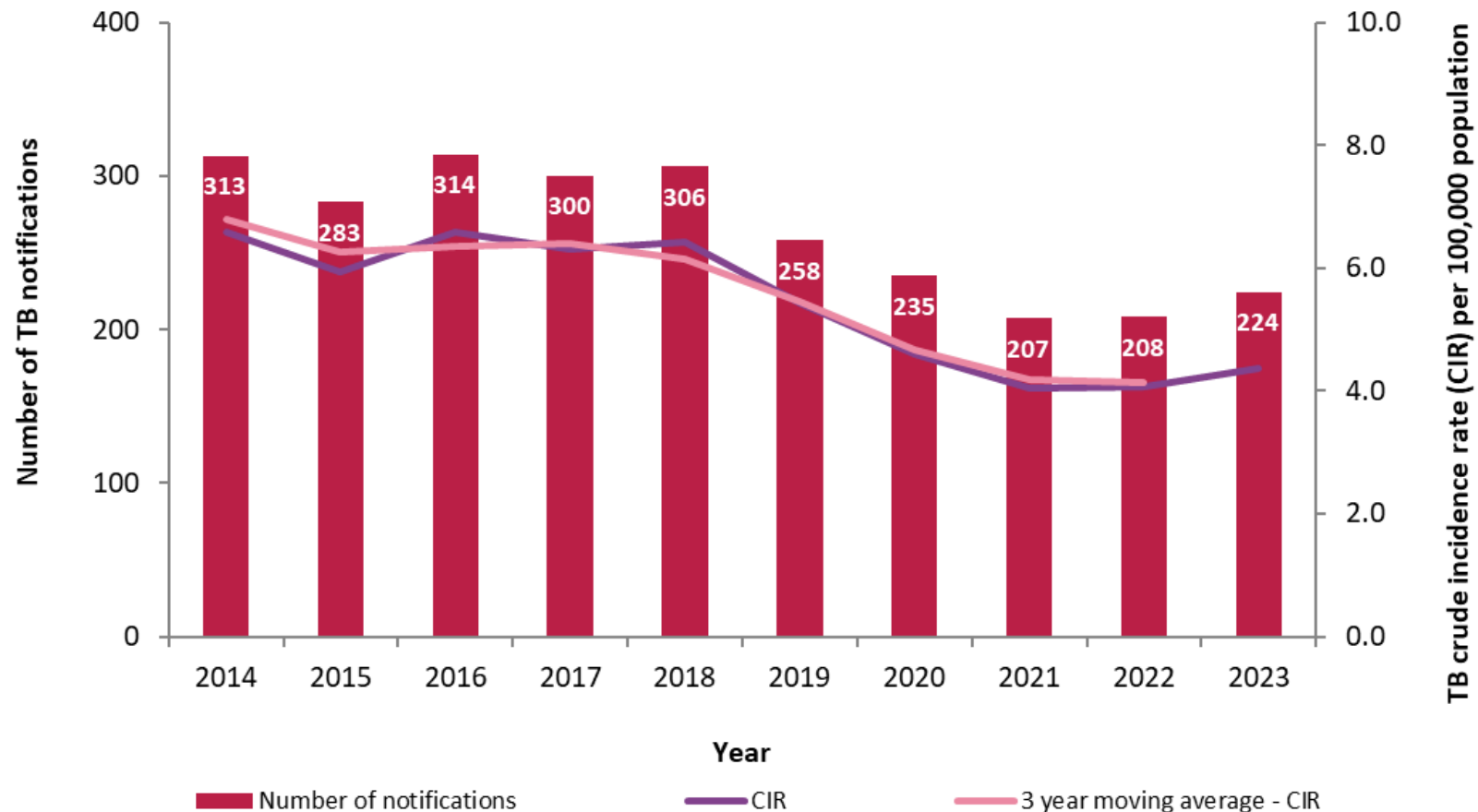
Health Protection Surveillance Centre

Key points:



- TB incidence increased slightly in 2023 but remains slightly below pre-pandemic levels
- Although the overall trend is declining, the number of cases reported exceeds the projected number of cases required to achieve End TB target
- No significant increase in paediatric TB rates observed despite absence of BCG vaccine
- Number of rifampicin resistant cases stabilised
- Treatment outcome completeness remained low, but improved slightly
- 36 cases notified during 2023 were linked to 21 clusters detected via Whole Genome Sequencing (WGS) by the Irish Mycobacteria Reference Laboratory (IMRL)

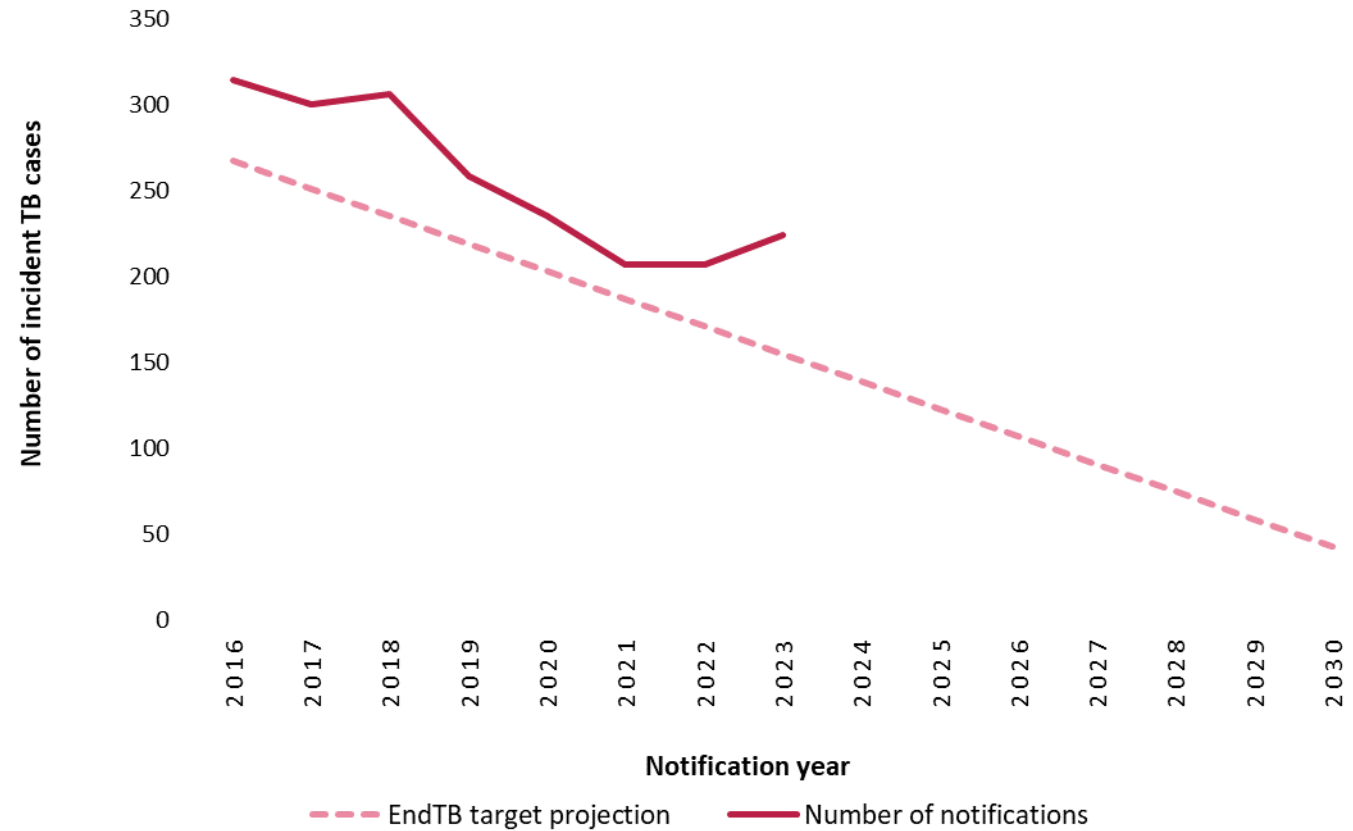
Annual TB notifications



Key points:

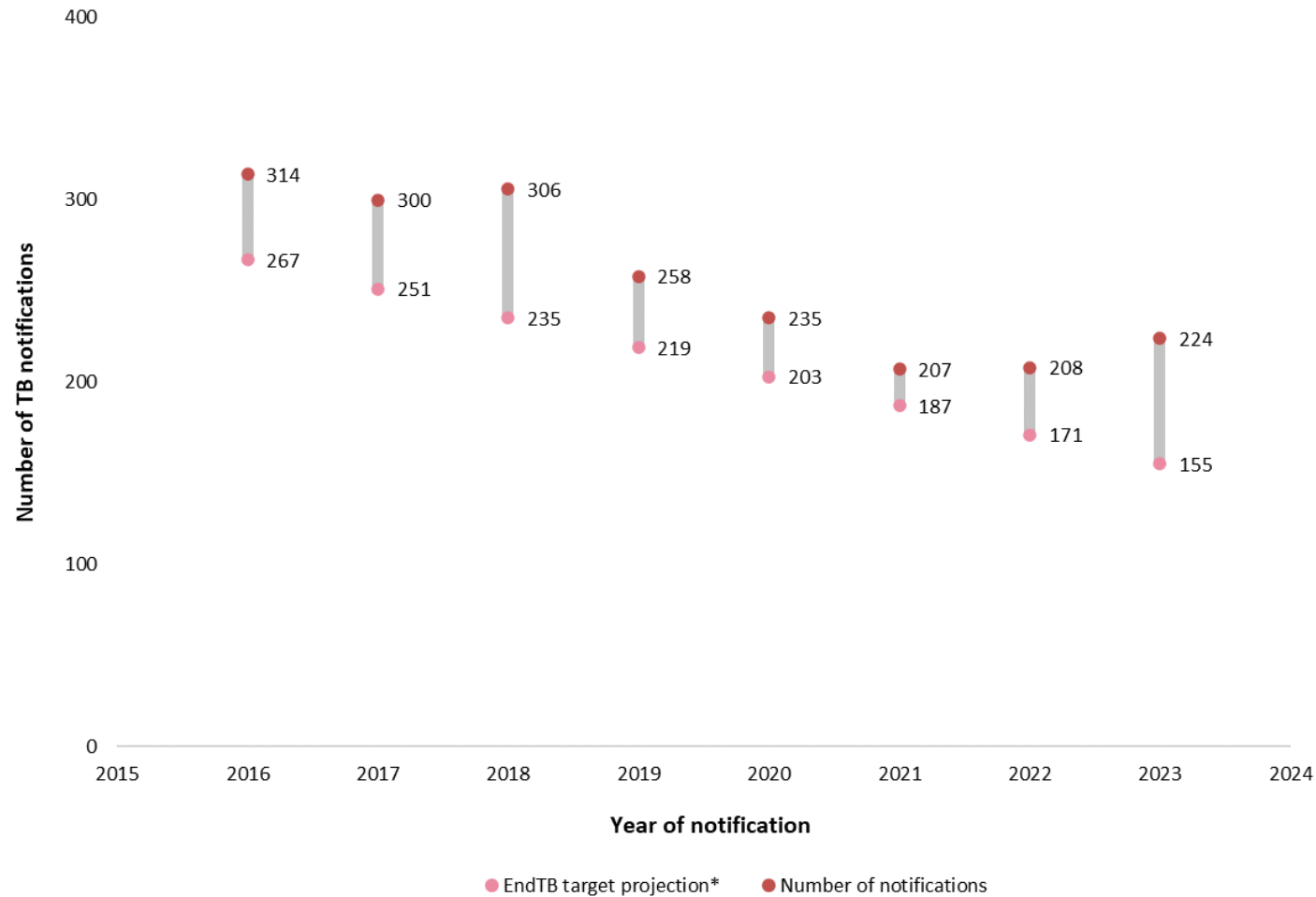
- There was a small increase in the number of TB cases reported during 2023
- Incidence rate ratios (IRRs) show significantly declining trends are present over the previous 5 years (IRR = 0.95) and 10 years (IRR = 0.94)

Annual TB notifications versus End TB target



Key point: An 80% reduction in cases by 2023 relative to 2015 levels is required to achieve End TB target

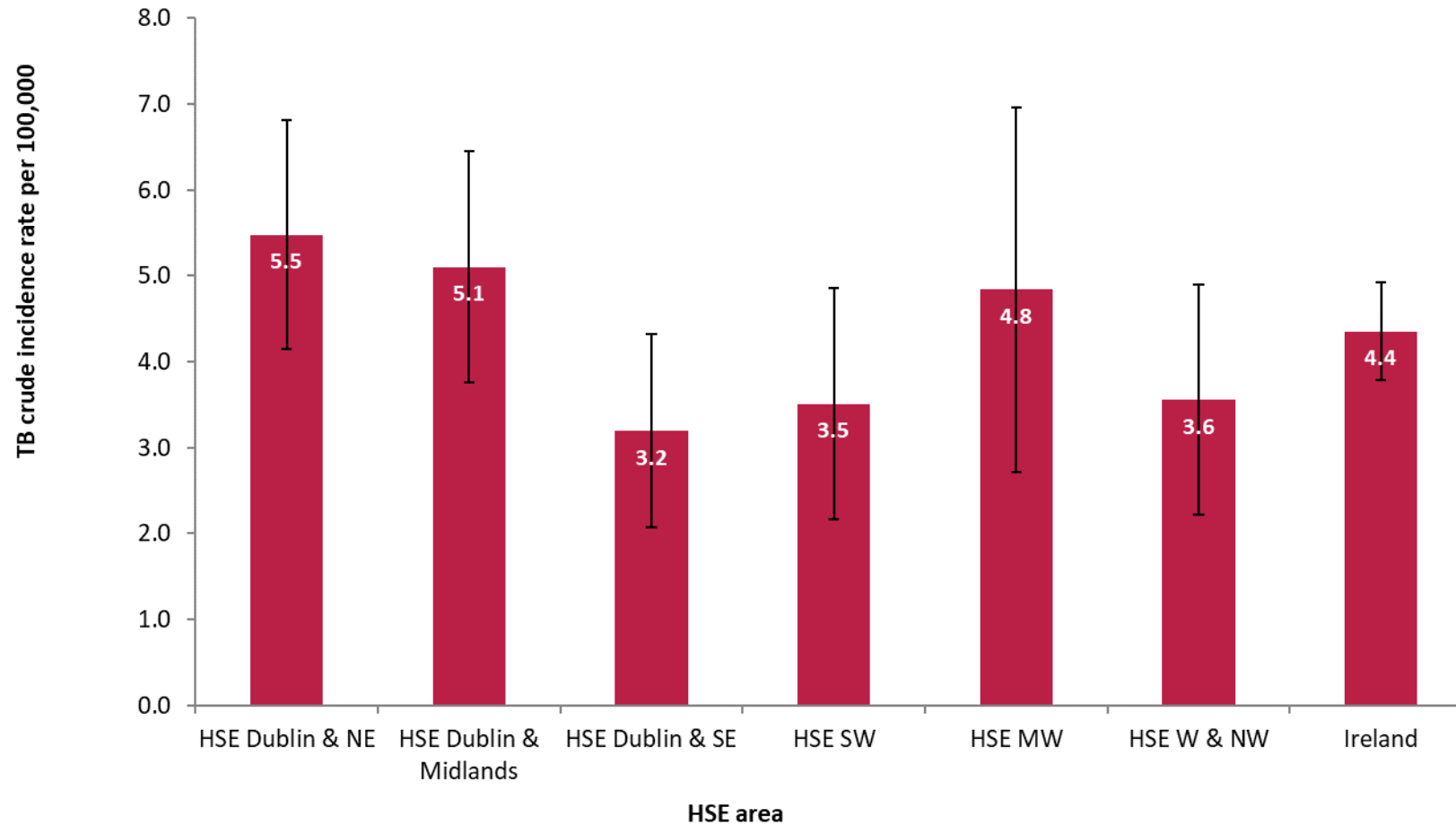
Annual TB notifications versus End TB target projections*



Key point: Although overall trend is declining, number of cases exceeds the projections required to achieve End TB target

*80% reduction in cases by 2030 relative to 2015 levels

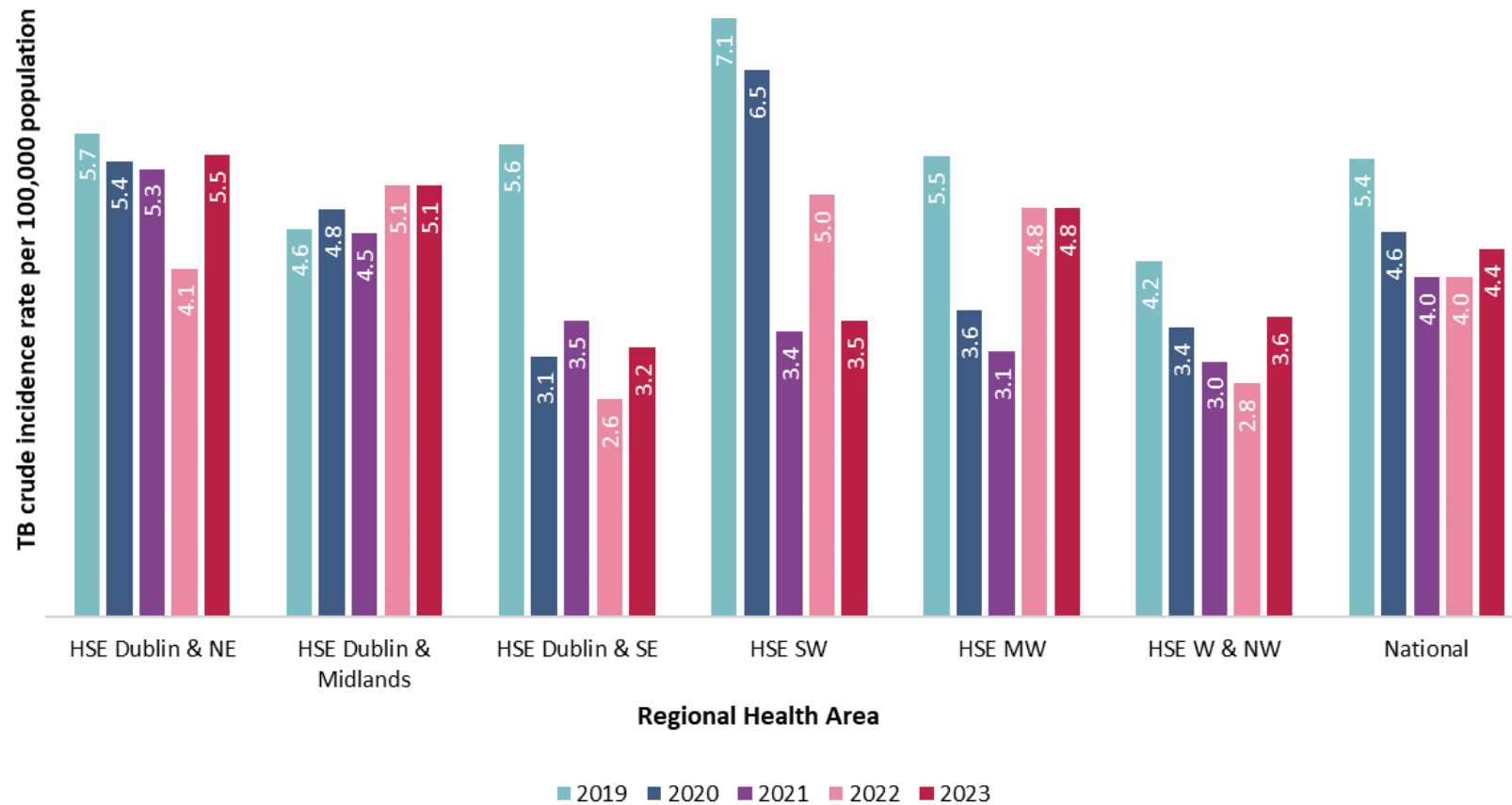
TB crude incidence rate by RHA: 2023



Key point:

Dublin & South East reported the lowest TB rate in 2023, while Dublin & North East reported the highest rate and the highest percentage of cases (27%).

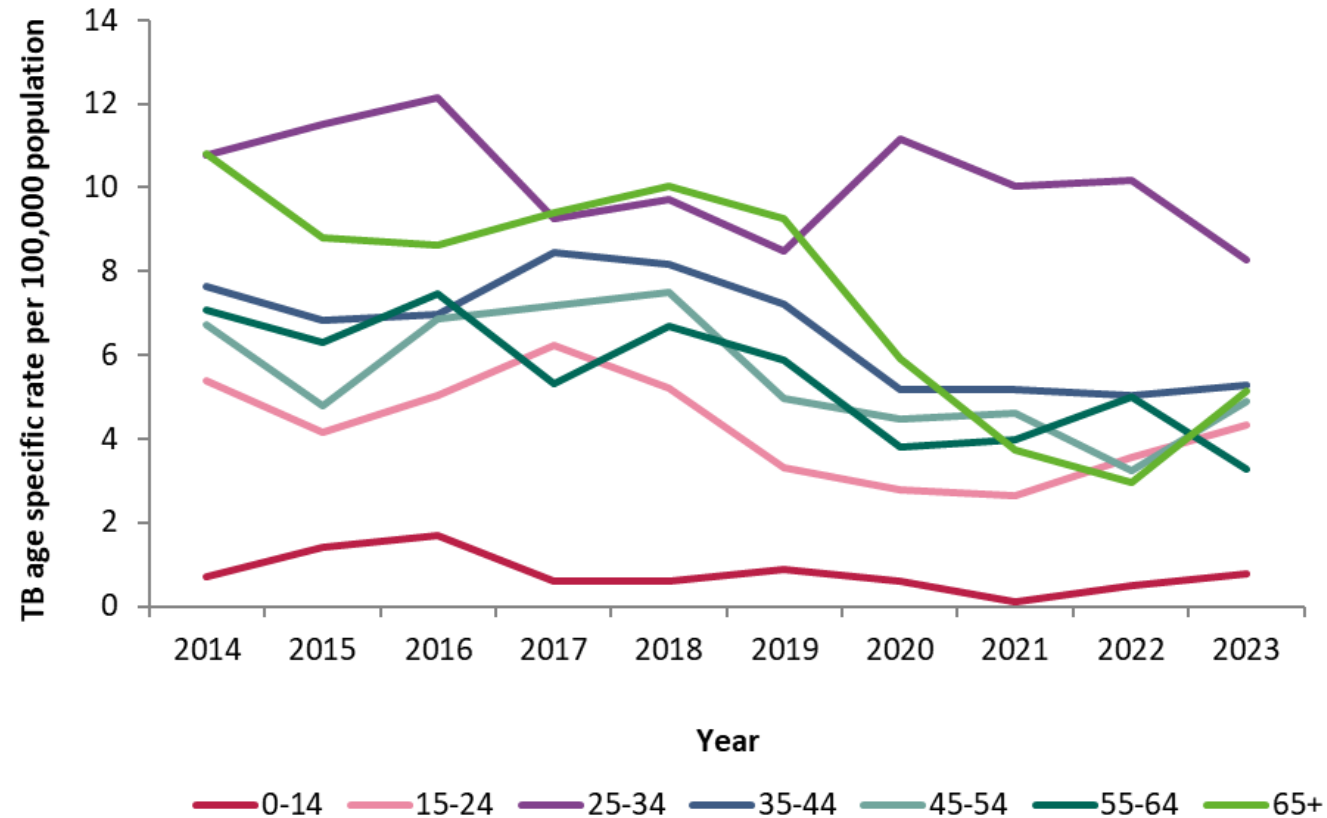
Annual TB crude incidence rate by RHA



Key points:

- TB rates increased in HSE Dublin & NE, HSE Dublin & SE, and HSE W & NW during 2023.
- The highest increase was observed in HSE Dublin & North East which is now approaching pre-pandemic levels.
- The HSE Dublin & Midlands rate remains above pre-pandemic levels since 2022.

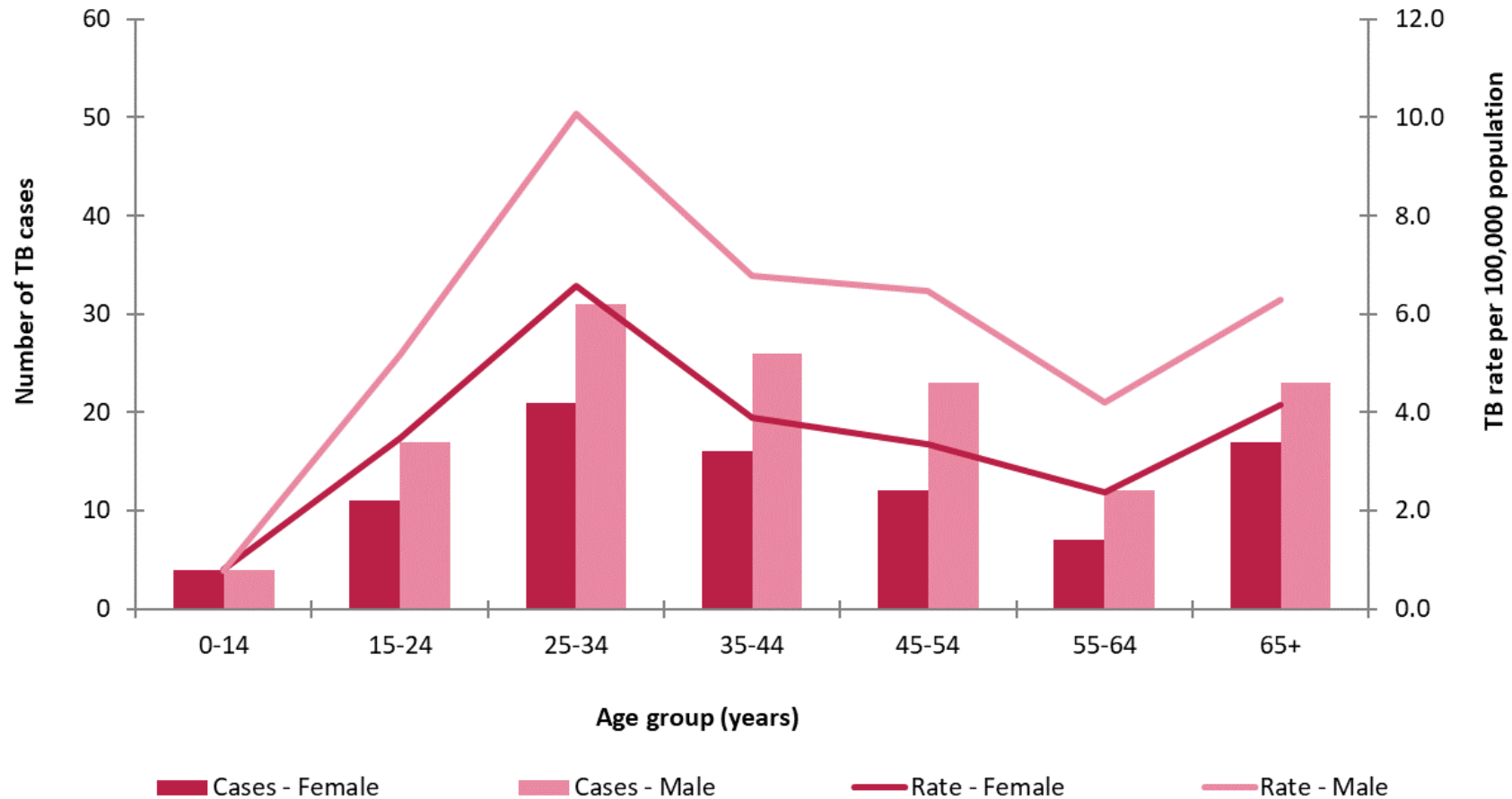
Annual TB age-specific rates



Key points:

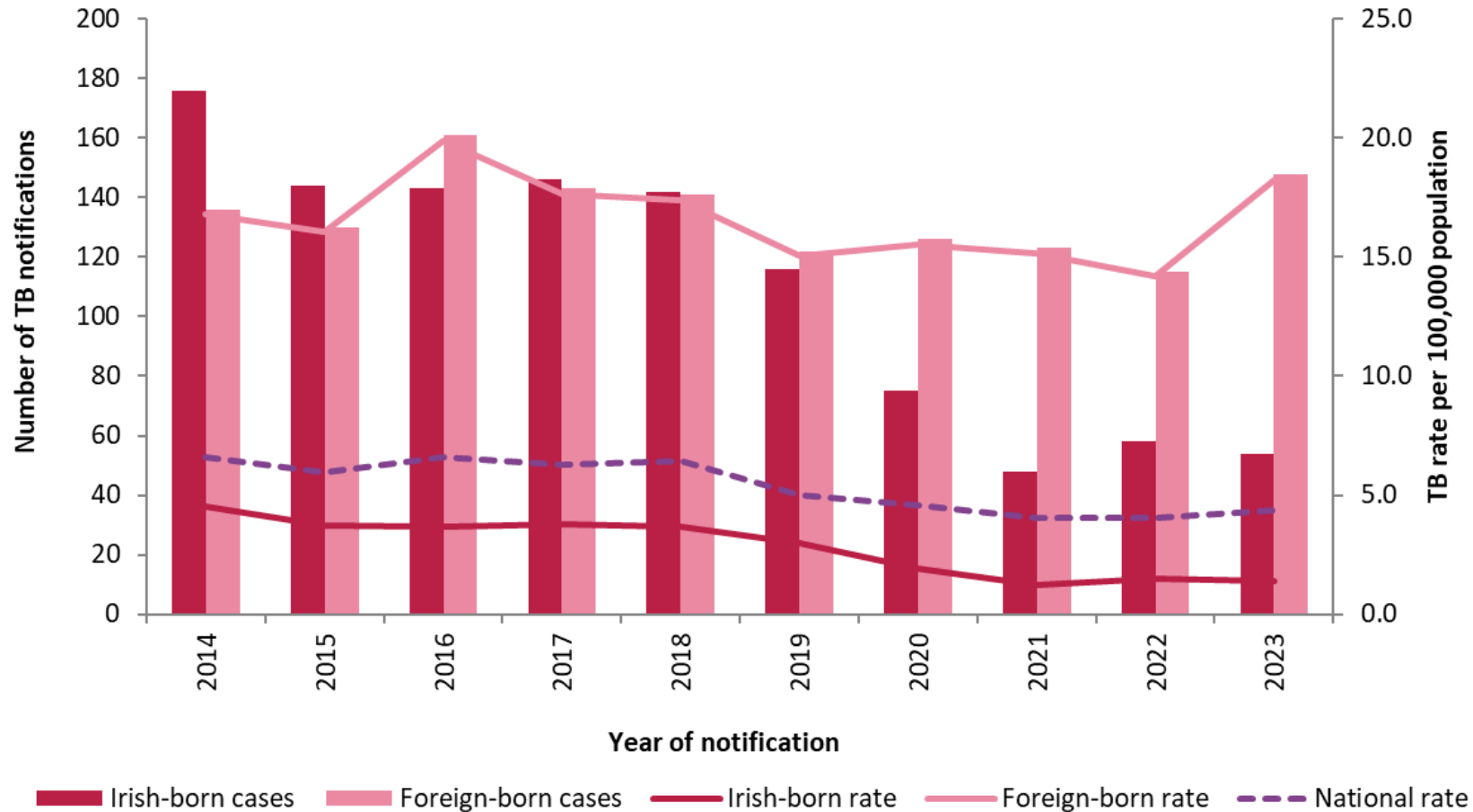
- TB rates are highest in those aged 25-34 years old while the lowest TB rates are in the under 15 year olds.
- Between 2020-2022, rates in those aged 65 years and older decreased, but subsequently increased in 2023.

TB age-specific rates by sex: 2023



Key point: TB rates are higher in males compared to females in the majority of age groups

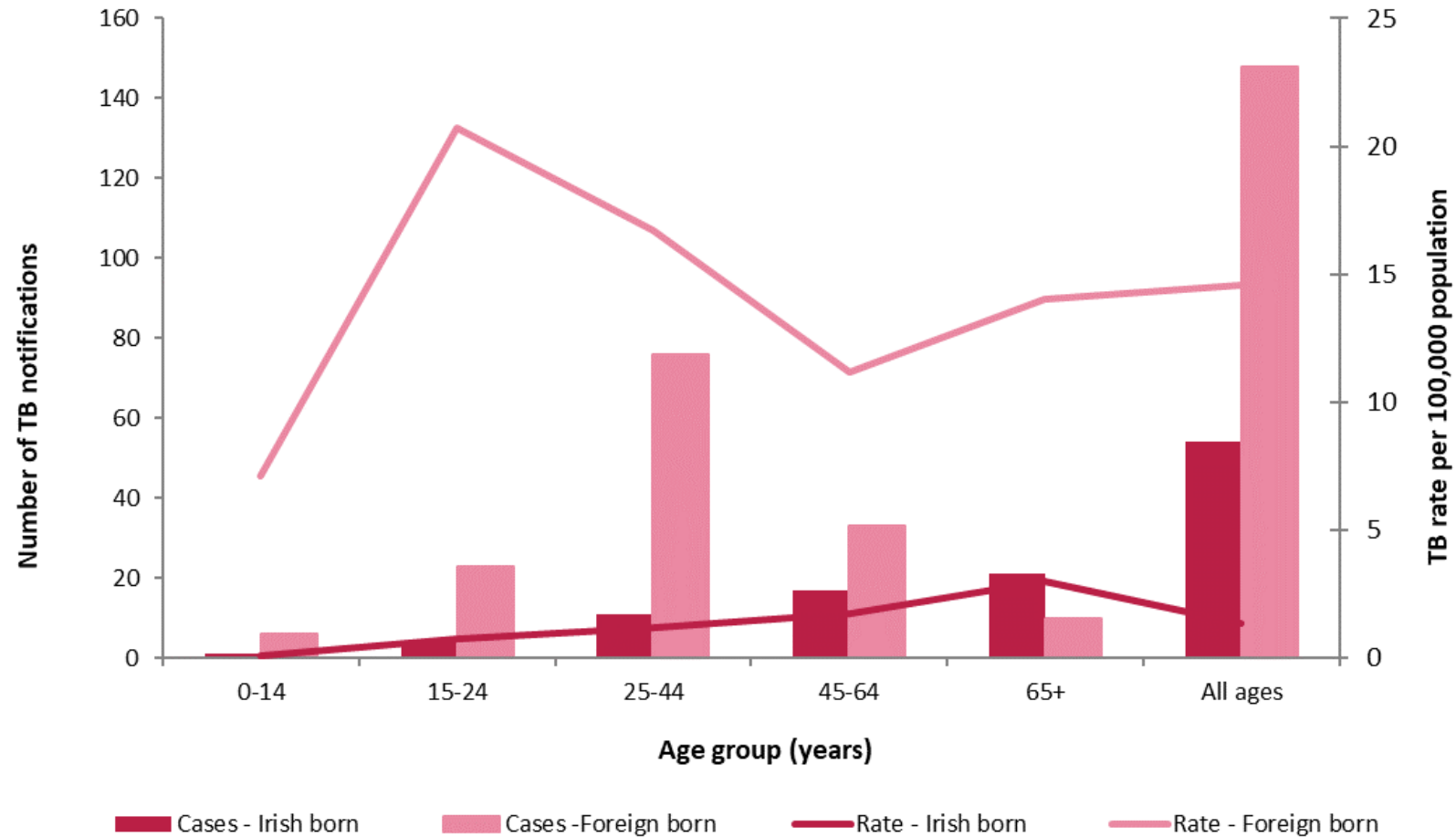
Annual TB notifications and rate by geographic origin



Key points:

- Rates were higher in people born outside Ireland (18/100,000) compared to people born in Ireland (1.4/100,000) & increased in 2023.
- 66% of cases in 2023 were born outside Ireland

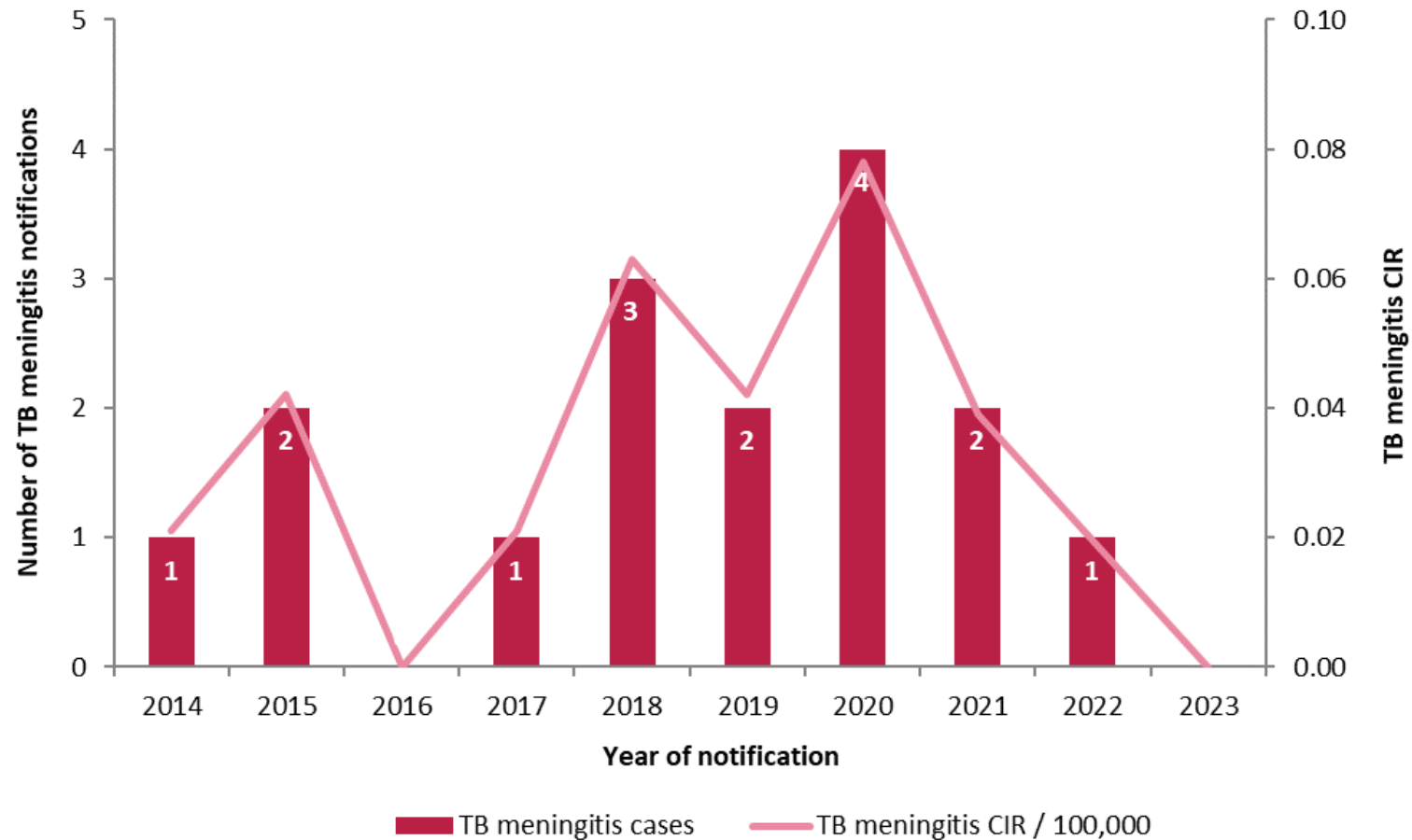
TB age-specific rates by geographic origin: 2023



Key point:

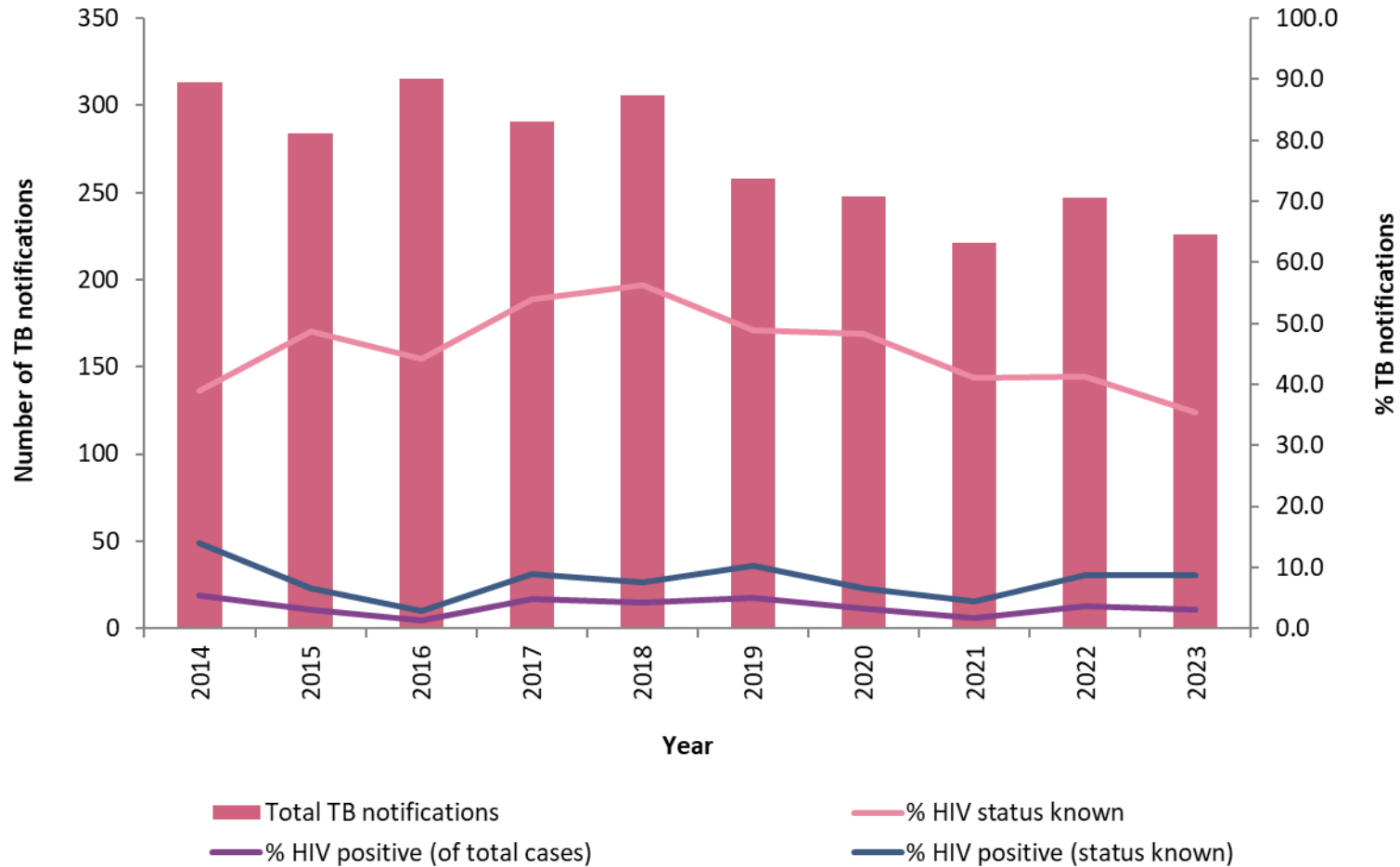
- For cases born outside Ireland, rates were highest in those aged 15-24 years old.
- For cases born in Ireland, rates were highest in those aged 65 years and older.

TB meningitis notifications by year



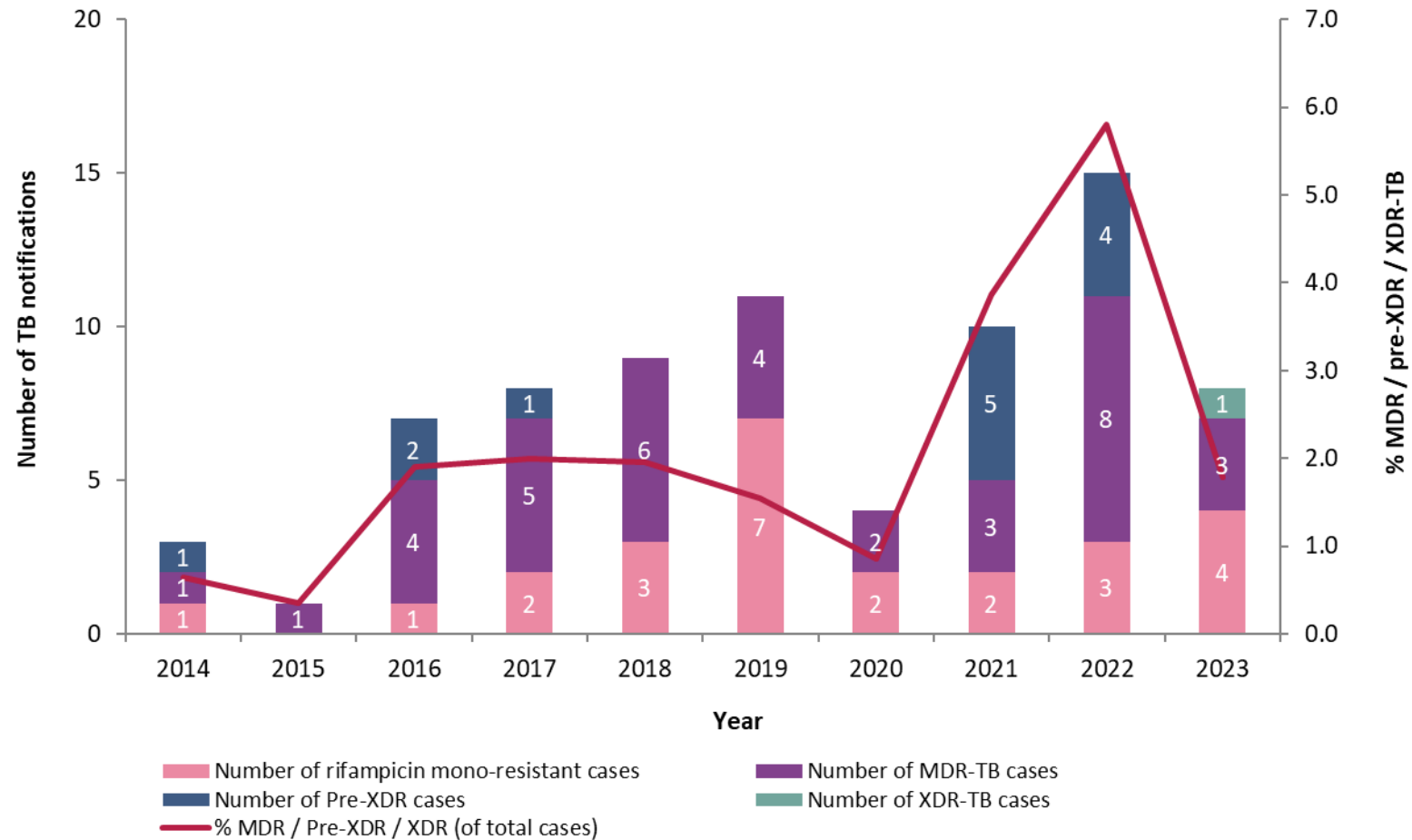
Key point: Between 2019-2023, one case of TB meningitis was aged 0-4 years old. The rest of the cases were in adults.

TB notifications by HIV status and year



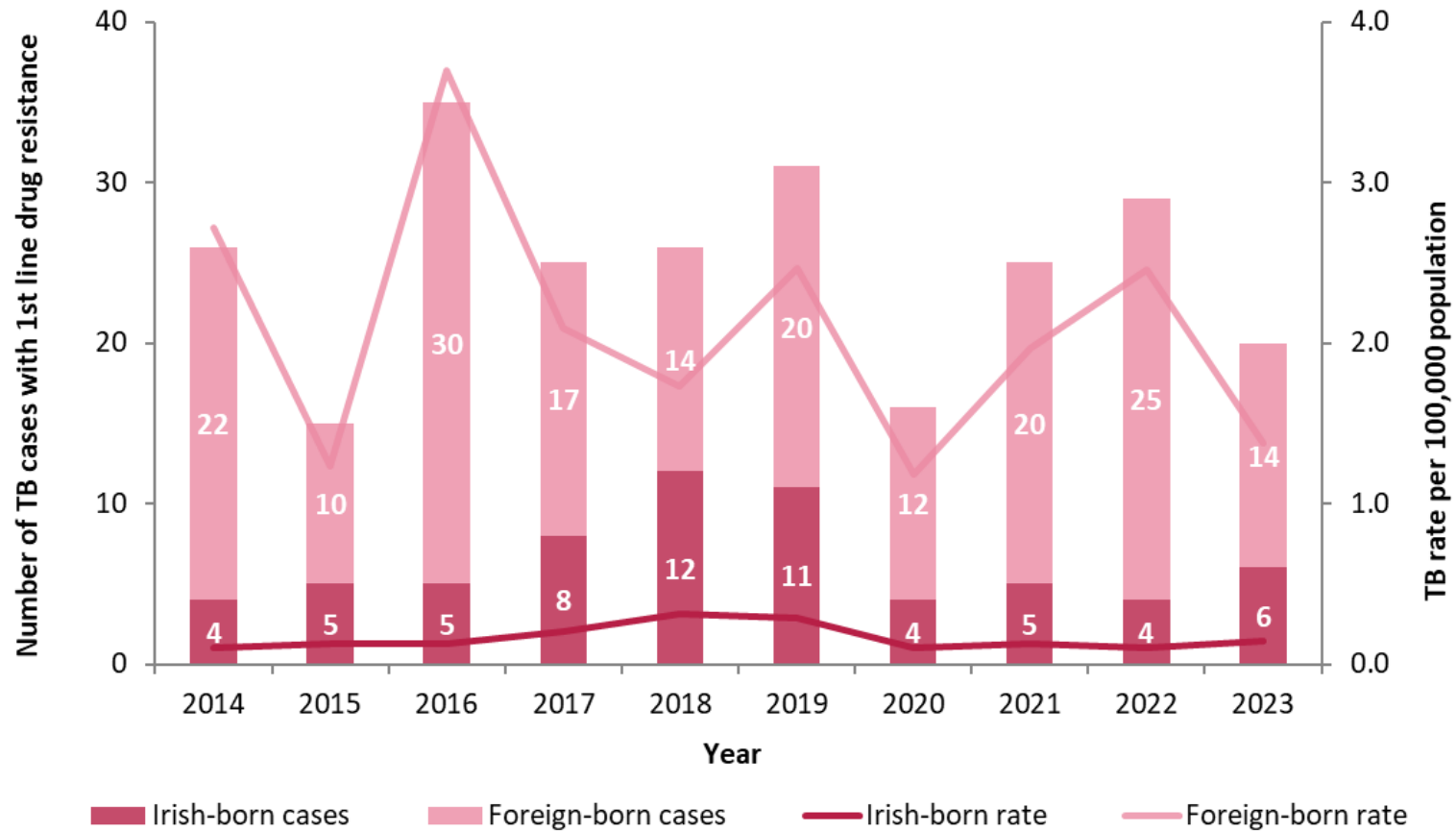
Key point: The percentage of TB cases living with HIV remains low, but HIV status was missing for over half of cases

Rifampicin resistant cases by resistance profile and year



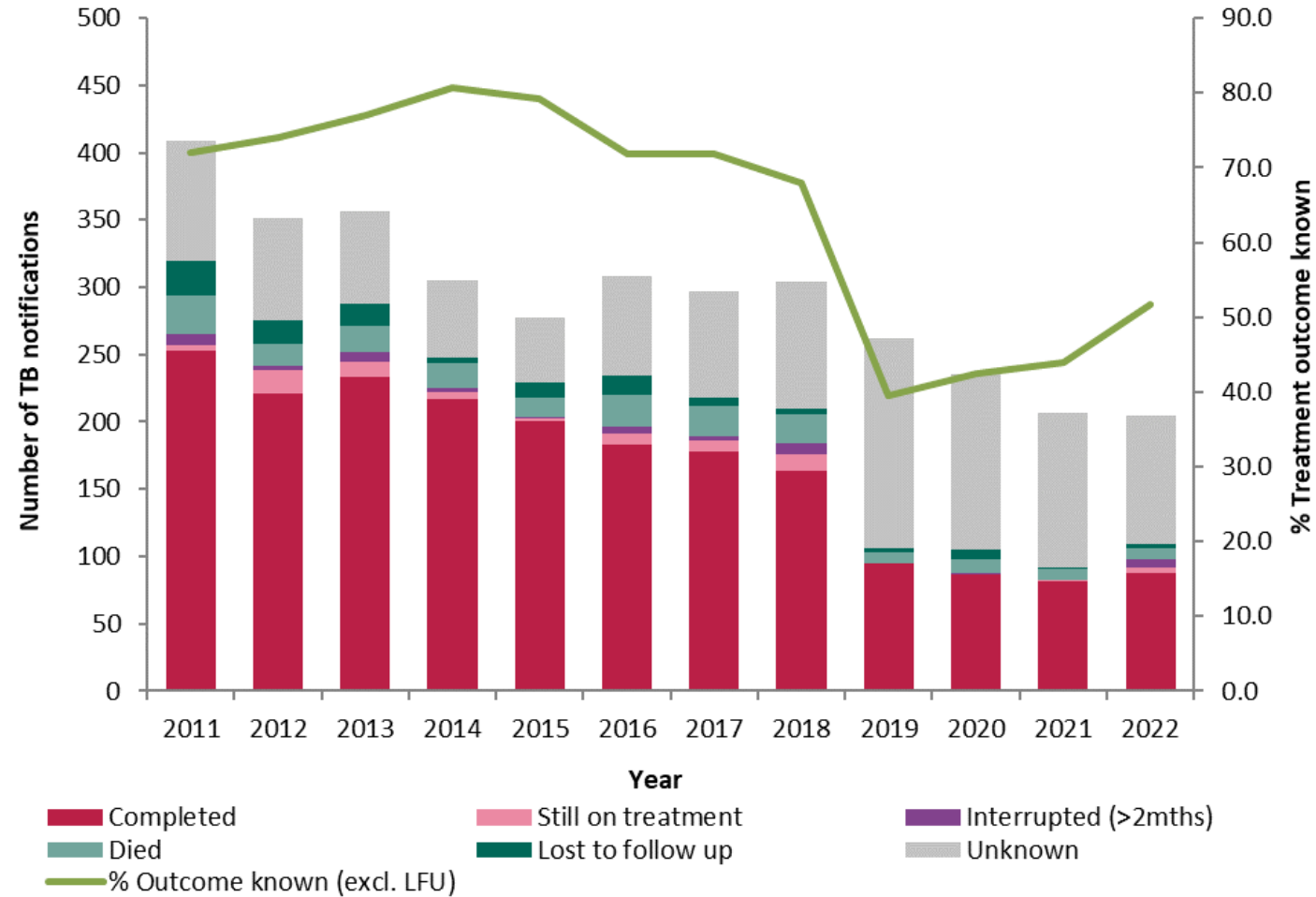
Key point: The percentage of TB cases infected with rifampicin resistant strains has stabilised during 2023 after an increase in 2022

First line TB drug resistance by geographic origin & year



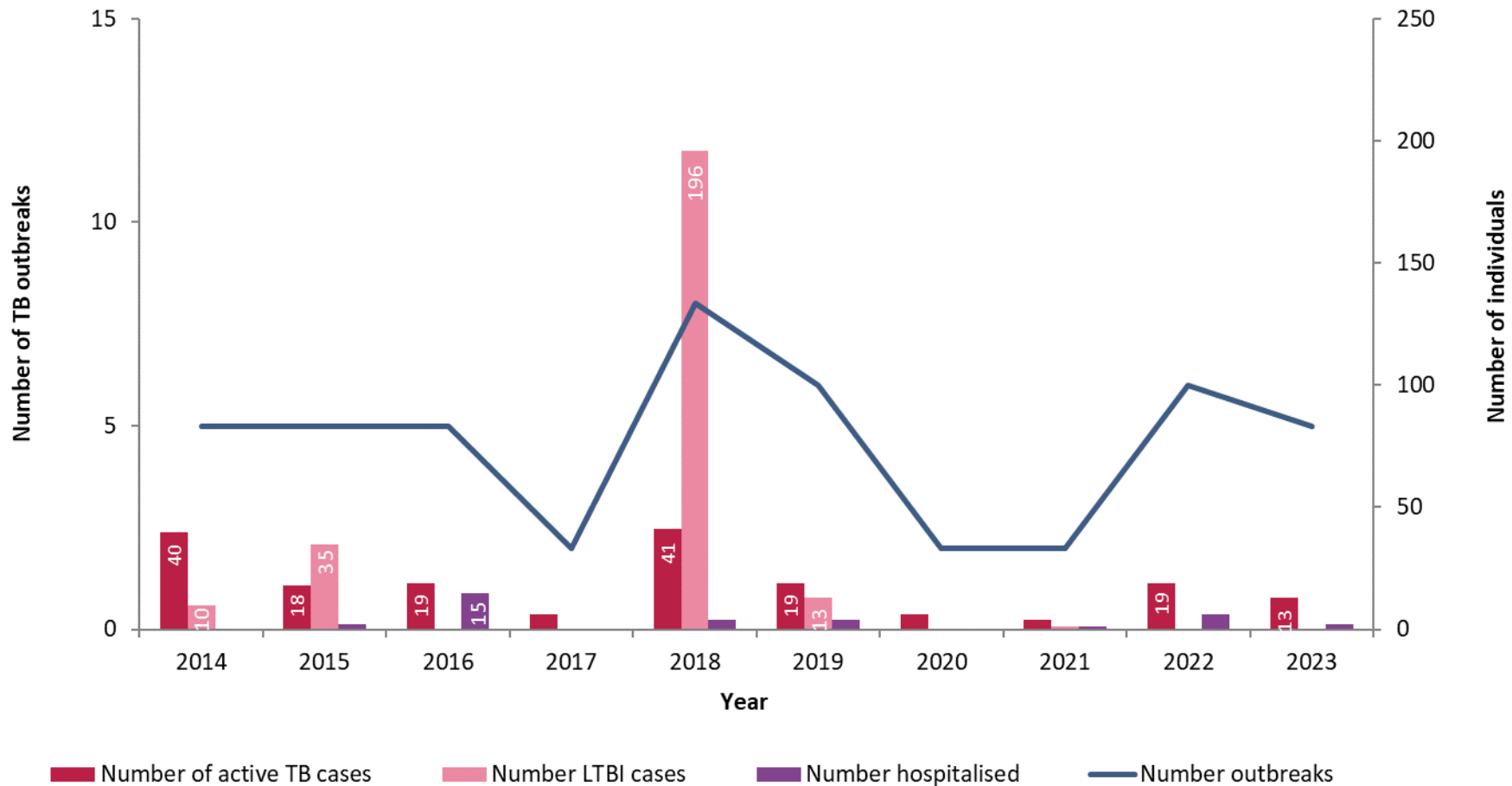
Key point: The percentage of TB cases infected with strains resistant to first line TB drug decreased in 2023 but remains higher in those born abroad

TB treatment outcomes by year



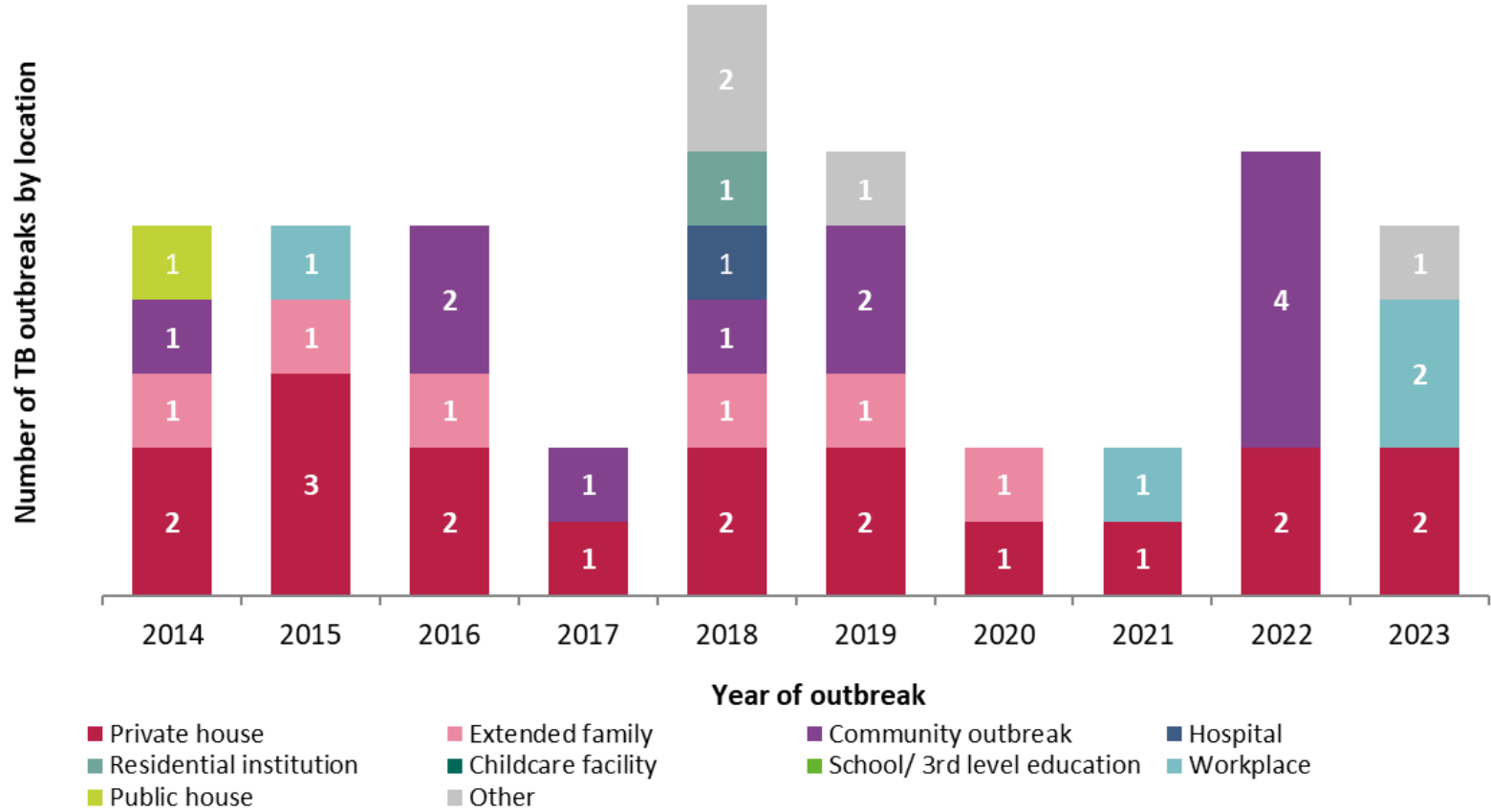
Key point: The percentage of TB cases with treatment outcome reported decreased during the pandemic, but is slowly increasing.

TB outbreak summary by year



Key point: The number of TB outbreaks remained low in 2023 (n = 5). Four outbreaks were confirmed by Whole Genome Sequencing results.

Annual number of TB outbreaks by location



Key point: The majority of TB outbreaks occur in private houses/ extended families & community settings.

- 36 cases notified during 2023 were linked to 21 WGS clusters
- Of these 21 WGS clusters, 17 spanned multiple years and 4 were confined to 2023 cases
 - cluster start dates ranged from 2007-2023
- The most common lineages among clusters were Euro-American (n = 5) and X (n = 5)
- 6 WGS clusters (29%) were reported as outbreaks:
 - 5 outbreaks represented the entire cluster
 - 1 outbreak represented a subset of epidemiologically linked cases within the WGS cluster (n = 2/4)

Acknowledgements



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- Departments of Public Health
- Irish Mycobacteria Reference Laboratory
- Clinical staff
- Diagnostic laboratories

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Technical notes:



Background

This report presents a provisional epidemiological summary of the cases of tuberculosis (TB) notified in Ireland up to 2023. Analyses are provisional and the underlying data remain subject to further change following validation.

Methods summary







- HPSC produces TB reports using notification data reported by departments of public health and laboratories to the CIDR system. Full details of the methods are available at www.hpsc.ie
- Incidence rates were calculated using population data taken Census 2022.
- Provisional data were extracted from CIDR on 04/03/2024.

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Appendix 1: Regional Health Area (RHA) geography



-  **FSS an Iarthair agus Iarthuaiscirt**
HSE West and North West
-  **FSS Bhaile Átha Cliath agus an Oirthuaiscirt**
HSE Dublin and North East
-  **FSS Bhaile Átha Cliath agus Lár na Tíre**
HSE Dublin and Midlands
-  **FSS an Iarthar Láir**
HSE Mid West
-  **FSS Bhaile Átha Cliath agus an Oirdheiscirt**
HSE Dublin and South East
-  **FSS an Iardheiscirt**
HSE South West

