

Exploratory Analysis of Measles Susceptibility Trends in Glasgow (1998–2012)

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1 Exploratory Data Analysis

Exploratory Data Analysis (EDA) was conducted to understand trends in measles susceptibility among pre-school children in Glasgow from 1998 to 2012. This includes examining year-to-year patterns, comparing susceptibility before and after 2004, and visualizing distributions to support further statistical analysis.

2 Summary statistic

Table 1: Mean Measles Susceptibility by Year

Year	mean_susceptibility
1998	0.0488
2000	0.0599
2002	0.0725
2004	0.0680
2008	0.0811
2010	0.0518
2012	0.0474

Table 1 shows the mean measles susceptibility by year. No sharp decline is observed post-2004, indicating that vaccine hesitancy may have persisted after the Wakefield article's retraction. Any recovery in vaccination rates appears gradual.

3 Data visualisation

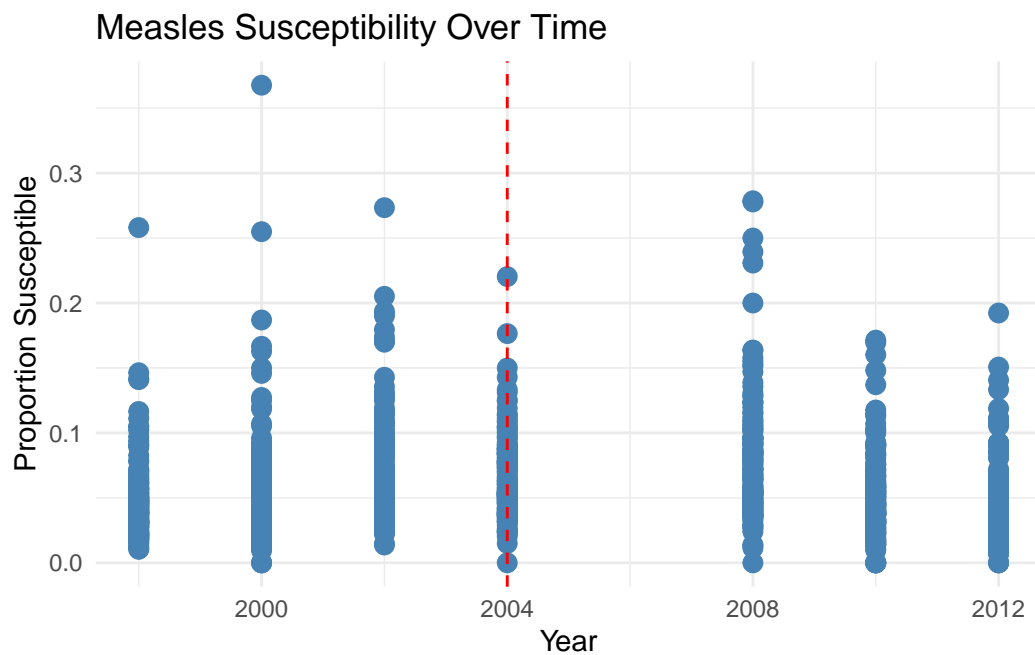


Figure 1: Measles Susceptibility Trend in Glasgow (1998–2012)

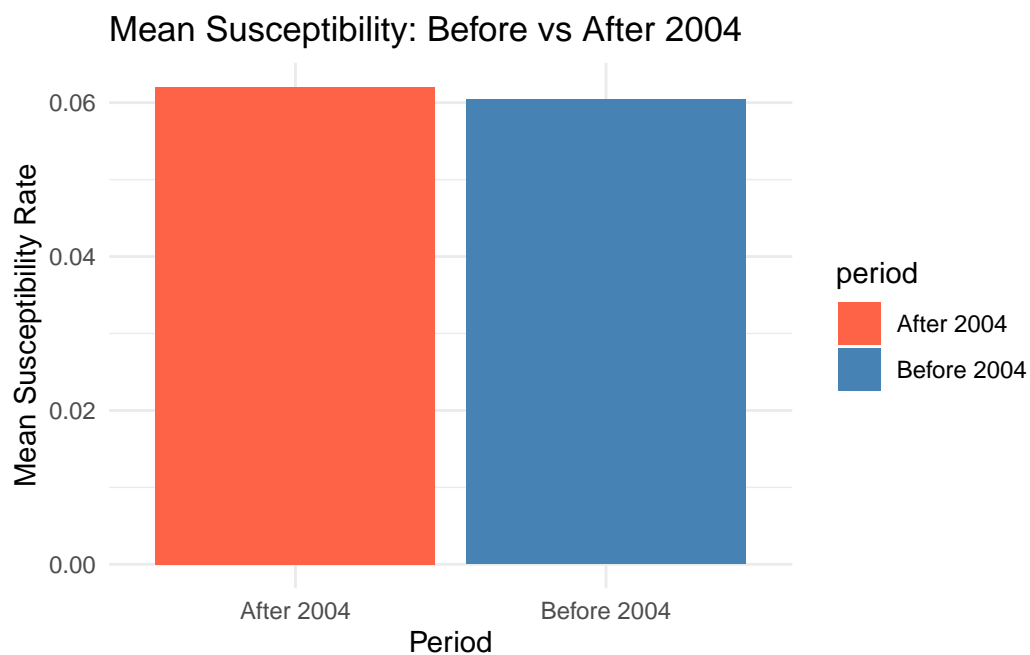


Figure 2: Mean Measles Susceptibility Before vs After 2004

Figures 1 and 2 show susceptibility trends over time and grouped by period. No immediate decline follows the 2004 retraction. This implies the article's retraction had limited short-term impact on susceptibility, reinforcing the persistence of vaccine hesitancy.