



Representativeness of IQVIA Medical Research Data: A Multi-domain Assessment Against National Demographic, Mortality and Disease Benchmarks in England

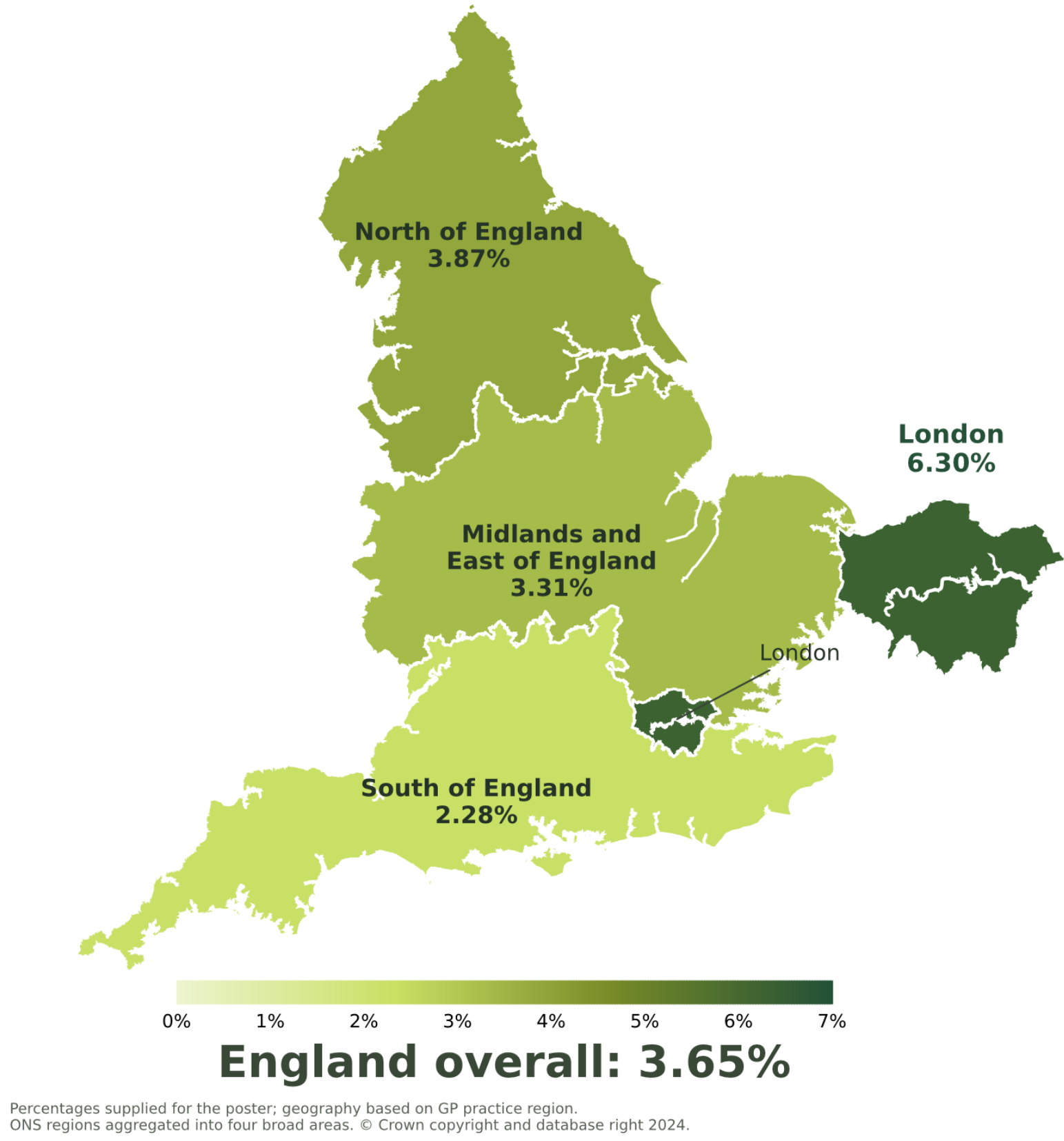
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Background and objective

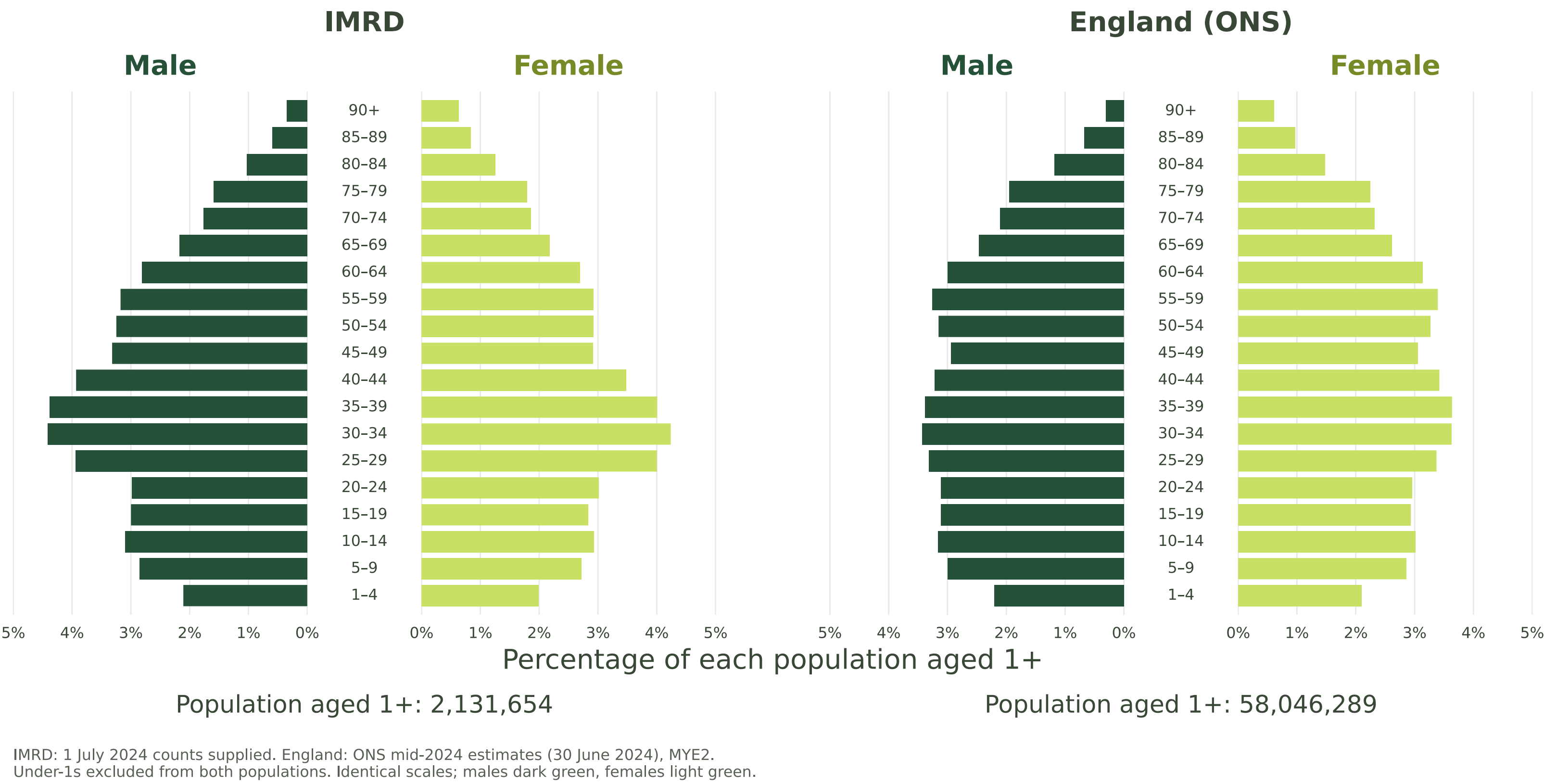
UK primary care databases provide longitudinal health records and population denominators for epidemiological and outcomes research. To be of “**Research Quality**”, **medical databases require reliable denominators and sufficiently complete and accurate records**. Earlier work developed acceptable mortality reporting (AMR) criteria to address incomplete death recording.¹ Other databases have used “up to standard” (UTS) criteria.² **We compared the contemporary EMIS-based IQVIA Medical Research Data (IMRD) in England with national demographic, mortality, disease and prescribing benchmarks to assess its representativeness and suitability for epidemiological and outcomes research.**

Geographical coverage



IMRD coverage ranged from 2.28% of the regional population in the South of England to 6.30% in London, compared with 3.65% across England.

Age and sex distribution



IMRD included a greater proportion of adults aged 25–44 years than the England population. Both population pyramids show percentages among people aged ≥1 year.

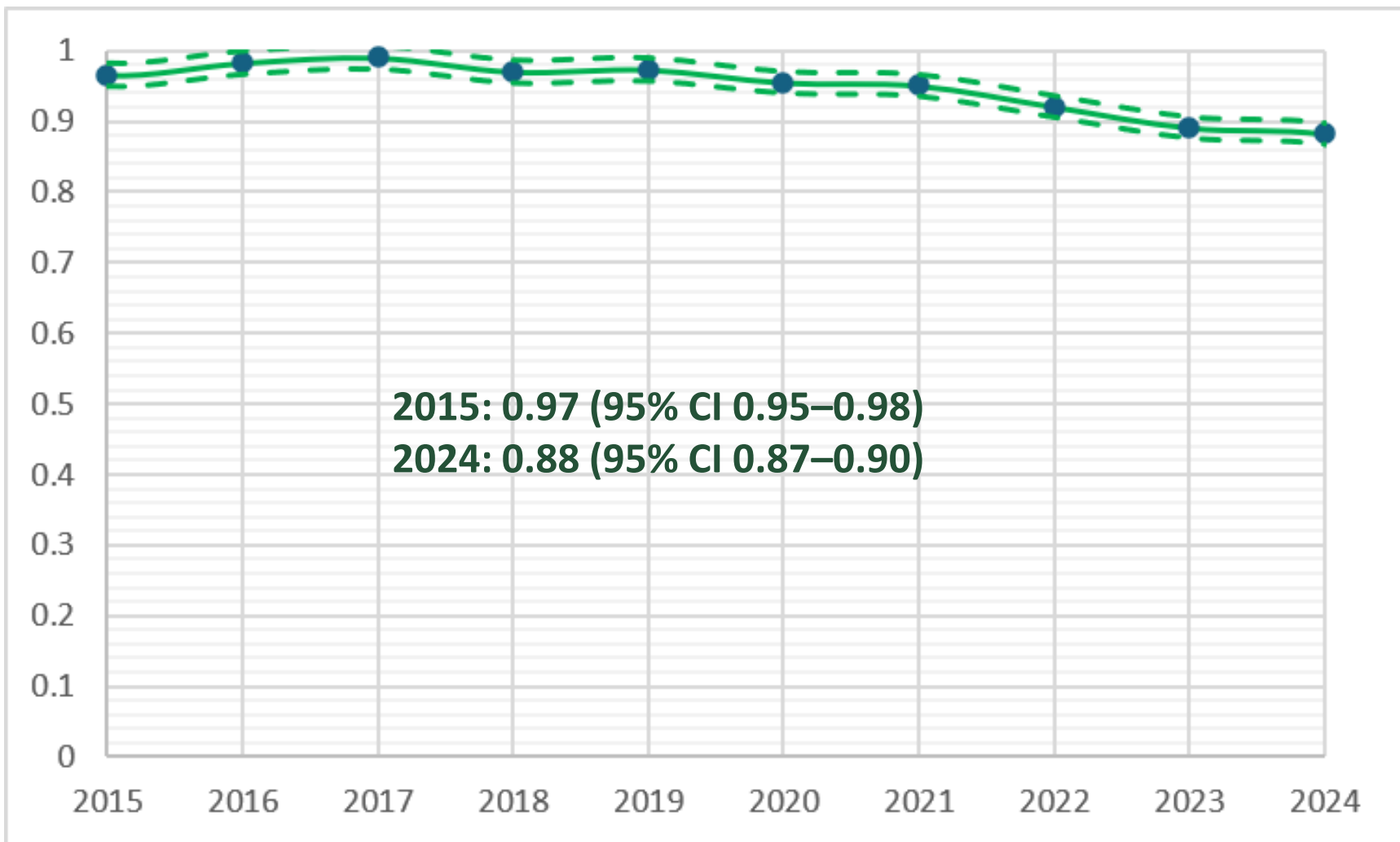
Disease prevalence

Condition	IMRD %	95% CI	England: QOF %
Diabetes overall ¹	7.81	7.72–7.89	7.66
Type 2 ¹	7.36	7.27–7.44	—
Type 1 ¹	0.49	0.48–0.51	—
CHD	2.81	2.70–2.91	2.97
COPD	1.90	1.83–1.97	1.86
Heart failure	1.11	1.10–1.13	1.06
CKD ²	4.84	4.81–4.87	4.41

¹ Ages 17+. ² Ages 18+. QOF [NHS England’s Quality Outcomes Framework] 2023–24 uses registered patient denominators. IMRD estimates standardised to England. QOF has no type-specific diabetes comparator.

- Age- and sex-standardised IMRD prevalence estimates were close to QOF benchmarks for the conditions examined.
- Diabetes estimates relate to ages ≥17 years and CKD estimates to ages ≥18 years. QOF 2023–24 estimates use registered patient denominators. IMRD estimates were standardised to the England population. QOF does not provide separate prevalence estimates for type 1 and type 2 diabetes.

Mortality recording



- The SMR was 0.97 (95% CI 0.95–0.98) in 2015 and 0.88 (95% CI 0.87–0.90) in 2024.
- In 2024, recorded mortality was 12% below that expected from England’s age- and sex-specific mortality rates.

Prescribing trends



Both sources captured increasing atorvastatin and decreasing simvastatin use. Semaglutide rates were consistently lower in IMRD.

Discussion

Standardised disease prevalences were close to QOF benchmarks despite differences in regional coverage and age structure. Differences in assessment dates, denominators and case definitions limit exact agreement. The 2024 SMR of 0.88 may reflect population differences, incomplete or delayed death recording, or both. The findings support research use but do not establish complete mortality ascertainment. The need for AMR-type criteria should therefore be assessed for the study period and outcome.

Prescribing magnitudes and several trends were broadly similar. Differences in repeat-issue counting, prescription duration and timing can affect comparisons. However, the distinction between prescribing and dispensing alone cannot explain lower IMRD semaglutide rates. Its evolving use for diabetes and weight management may contribute to differences in uptake between populations. Regional uptake and prescription capture warrant further investigation.

Conclusions

These findings support IMRD as a research-quality data source for the periods and domains assessed. Standardised disease prevalence estimates aligned closely with national benchmarks, and several prescribing trends were reproduced. Study-specific checks remain appropriate and further work on the latest SMR is warranted. Age- and sex-standardisation, with regional weighting where justified, should be considered when extrapolating findings to England.

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References and data sources
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