Two Paths, One Goal: Validating Primary Care Resource Use and Costs in OMOP-Mapped vs Source CPRD Data in the UK

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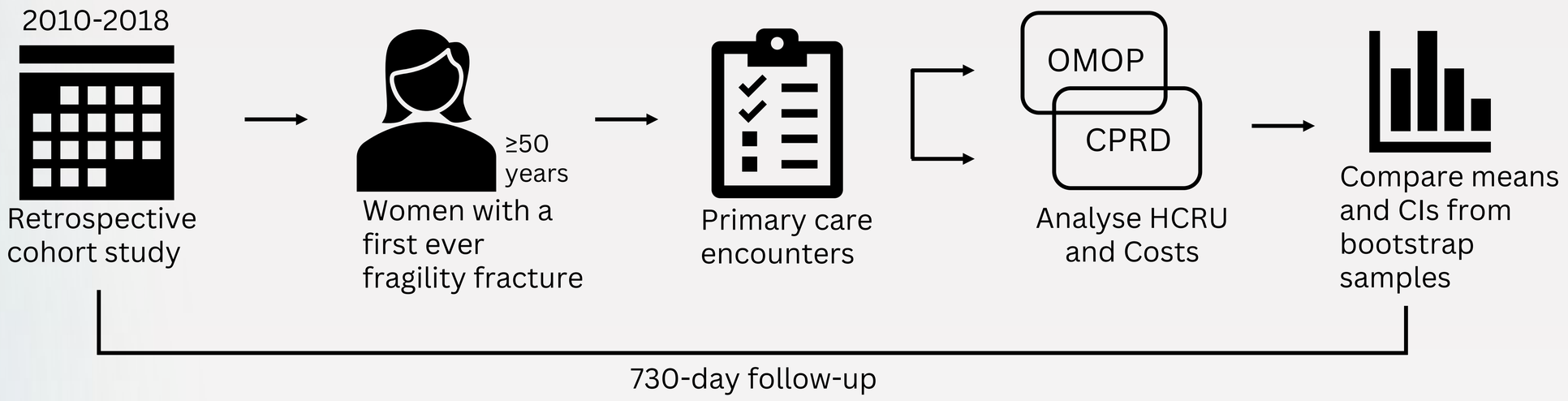
Objective

To validate the estimation of primary healthcare resource utilisation (HCRU) and associated costs derived from OMOP-mapped Clinical Practice Research Datalink (CPRD) data by comparing them to estimates from the corresponding CPRD source data, using a cohort of UK women with postmenopausal fragility fractures.

Methods



Results

Table 1: Patients characteristics

	Source-CPRD (n=23,106)	OMOP (n=22,900)
Mean age in years (SD)	71.3 (12.2)	71.3 (12.2)
Median follow-up time in days (Q1-Q3)	577 (191, 730)	578 (192, 730)
Fracture site	Hip (13.9%), Vertebra (7.2%), NHNV (78.9%)	Hip (14.0%), Vertebra (7.4%), NHNV (78.6%)
Primary care users*	22,478 (97.3%)	22,302 (97.4%)
Mean n encounters (CI)	39.00 (38.55-39.51)	38.31 (37.82-38.39)
Mean costs in £ (CI)	£ 1,112.79 (£1,099.22-£1,128.87)	£ 1,087.05 (£1,072.67-£1,101.74)

* Individuals with ≥ 1 clinical encounter (i.e., non admin)

Figure 1: Mean HCRU and Costs per month

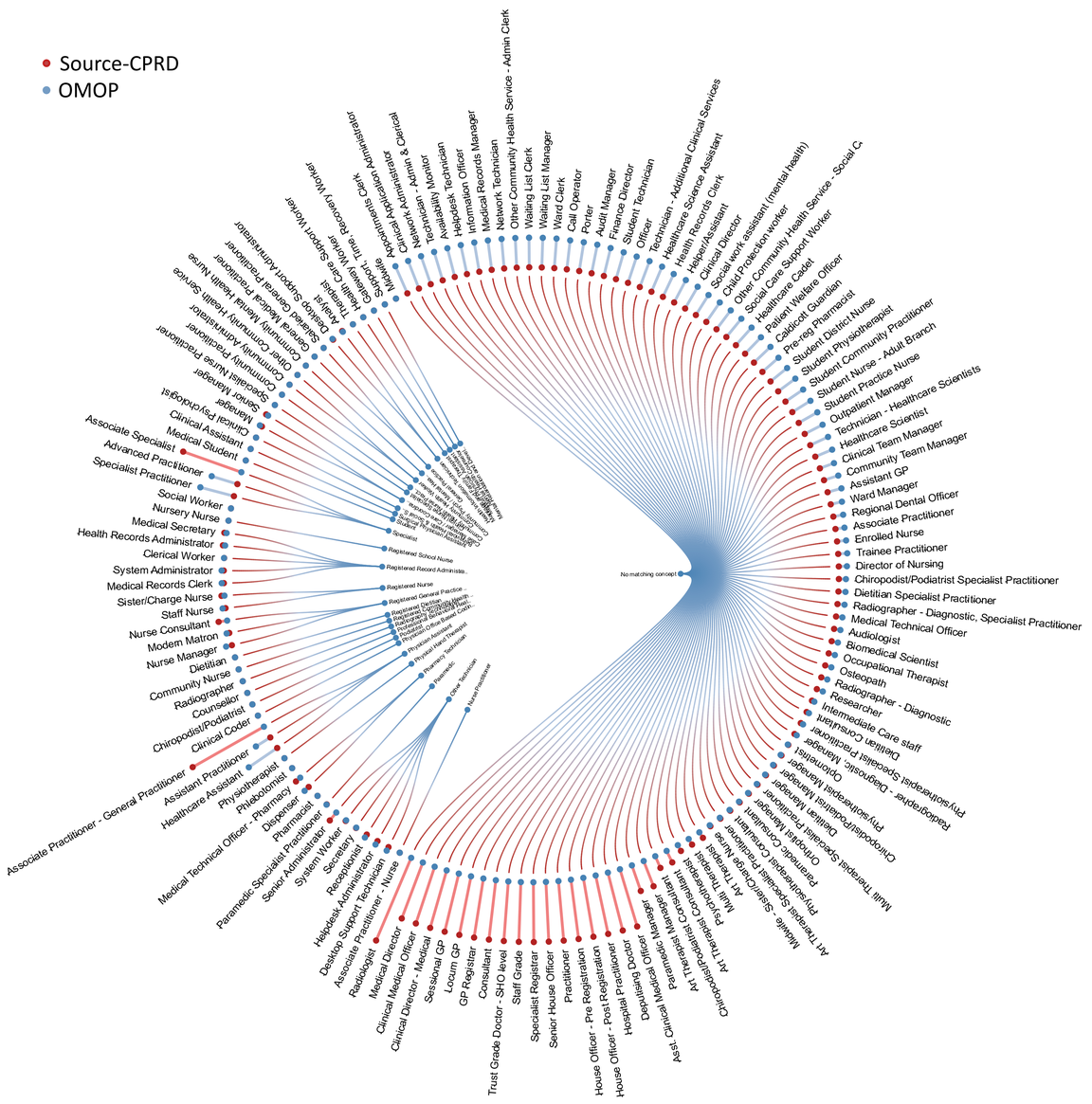


Figure 3: Specialty roles, Source-CPRD (outer circle) vs OMOP (inner), Dumbbell length = unit cost difference

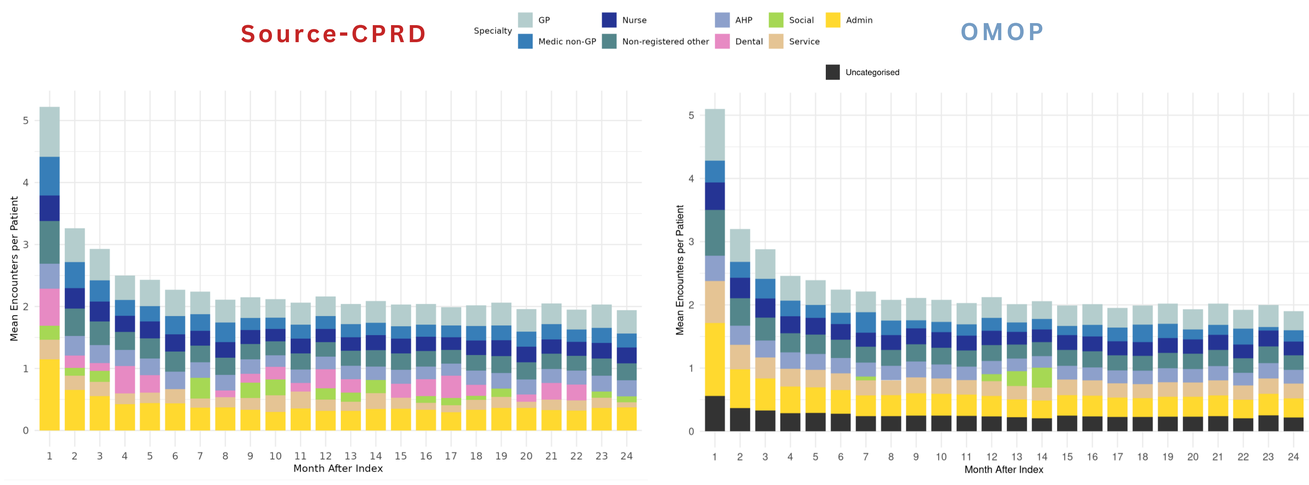


Figure 2: Mean HCRU by specialty category

Discussion

- Few less women in OMOP cohort due to mapping quality standards.
- Cost differences due to source-CPRD specialty codes lacking OMOP concepts, much less granular specialty roles in OMOP (Figure 3).

Conclusions

- OMOP-mapped CPRD produces comparable HCRU and cost estimates to Source-CPRD.
- Minor refinements to specialty vocabulary can enhance validity for wider health economics applications.

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