Uptake of breast screening: is where you live important?

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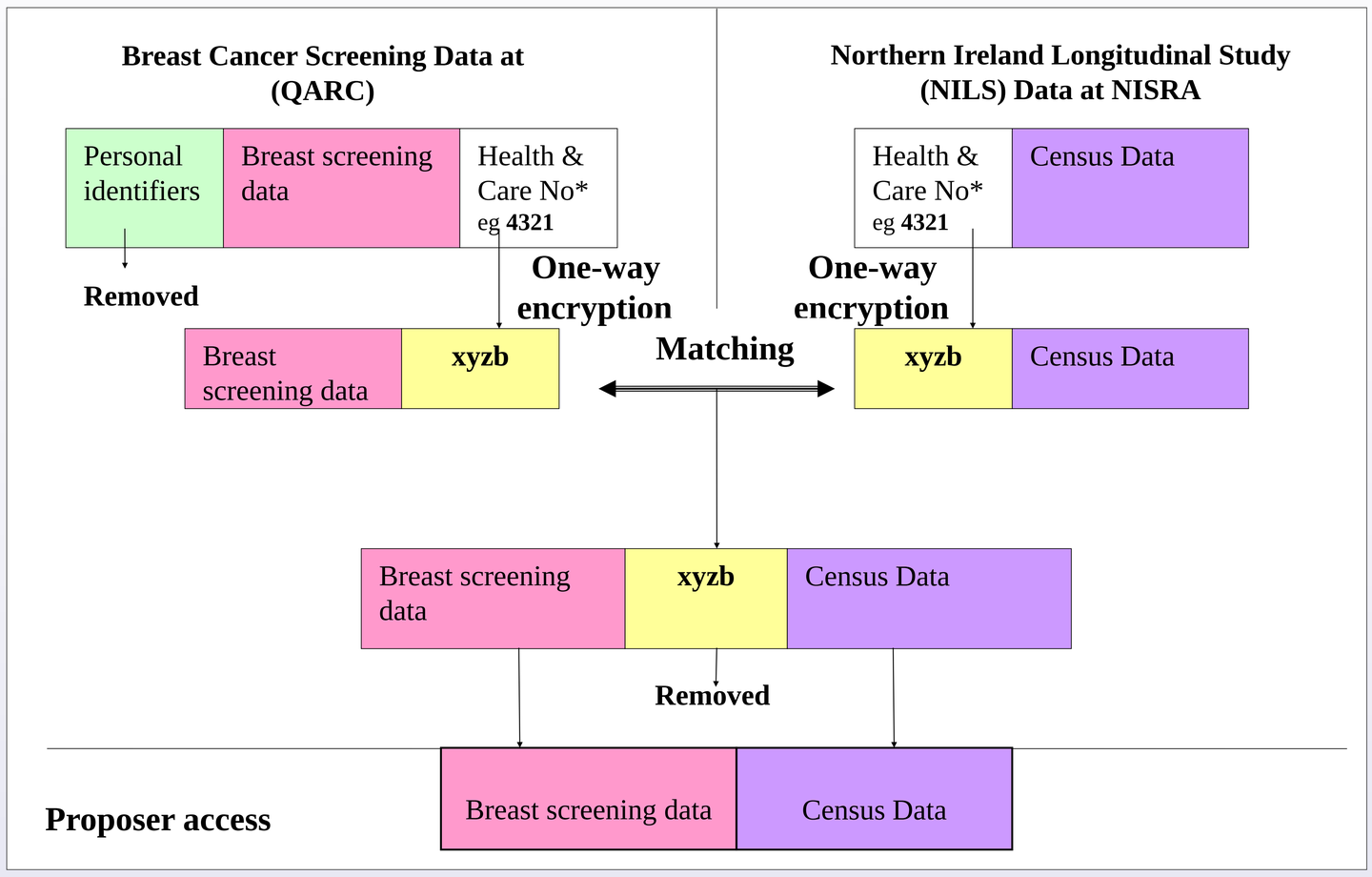
Design

Record linkage study combining data from the National Breast Screening System and the Northern Ireland Longitudinal Study (NILS – created in 2006) with cohort attributes from the 2001 Census.

After ethical approval and data encryption, five mutually exclusive areas were defined:

- Belfast Metropolitan Area (BMA) (comprising 26% population)
- Northern Health Trust (comprising 19% population)
- Southern Health Trust (comprising 18% population)
- Eastern Health Trust (comprising 22% population)
- Western Health Trust (comprising 15% population)

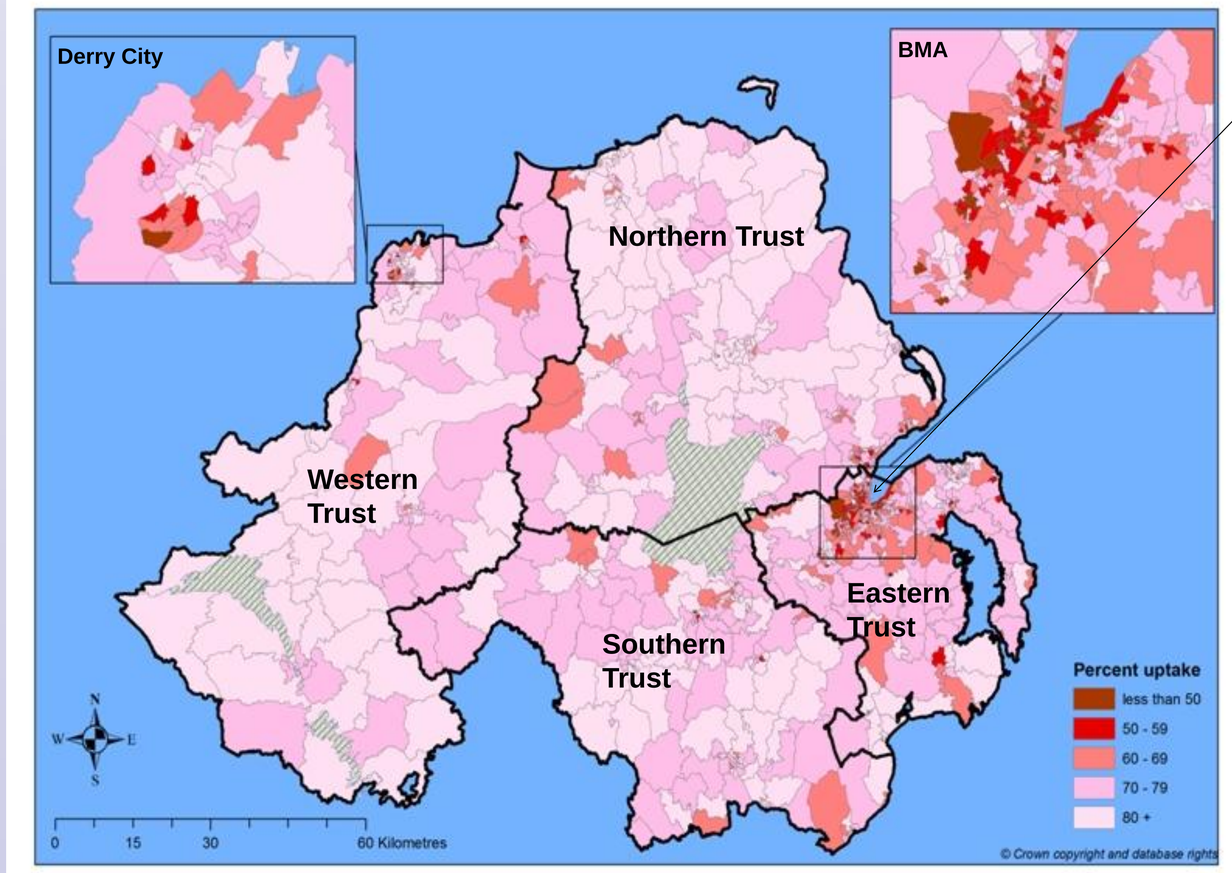
The above were responsible for the organisation and promotion of screening but not part of the BMA.



Participants:

37,059 women aged 48-64 at the time of the Census who had been invited for routine breast screening during the three years following the Census. Less than 1% of women in Northern Ireland belong to an ethnic minority.

Map of breast screening uptake in Northern Ireland (by Super Output Area)



Belfast Metropolitan Area in blue – split between Northern and Eastern Boards

Possible explanation for area effects

- Urban dwellers less concerned about health
- Difficulties informing women in some areas/access to clinics and/or opening times
- Perhaps not non-attenders but non-invitees

Results:

Uptake of screening was 75% during the study period. In fully adjusted models, uptake was lower amongst women aged 60+, not currently married and those whose general health was 'not good'. Uptake was related to car ownership and housing tenure but not educational status or social class as measured by NS-SEC. Even after adjustment for all other factors, there was significant variation in uptake within areas; uptake was lowest in the Eastern Board (OR=0.61, 95% CI=0.56, 0.66, compared to the Northern Board) and lower again in the BMA (OR=0.49, 95% CI=0.45, 0.53). The reduction in Belfast was evident across most social strata.

Conclusion: Area also matters

- Not composition/content
- Regression analyses controls for socio-demographic differences between areas
- Uptake for all residents is affected equally i.e.. Those in good health or those who are more affluent are still less likely to attend screening if they live in Belfast Metropolitan Area
- Tests for interactions shows that all residents are equally affected

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