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Birthweight distributions by gestational age for South Asian babies born in England

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Objective

To produce gestation-specific birthweight distribution charts for babies of Bangladeshi, Indian and Pakistani origin by mother's country of birth, sex and parity.

The charts currently available at a national level are based on White British population data from the 1970s.

Method (1)

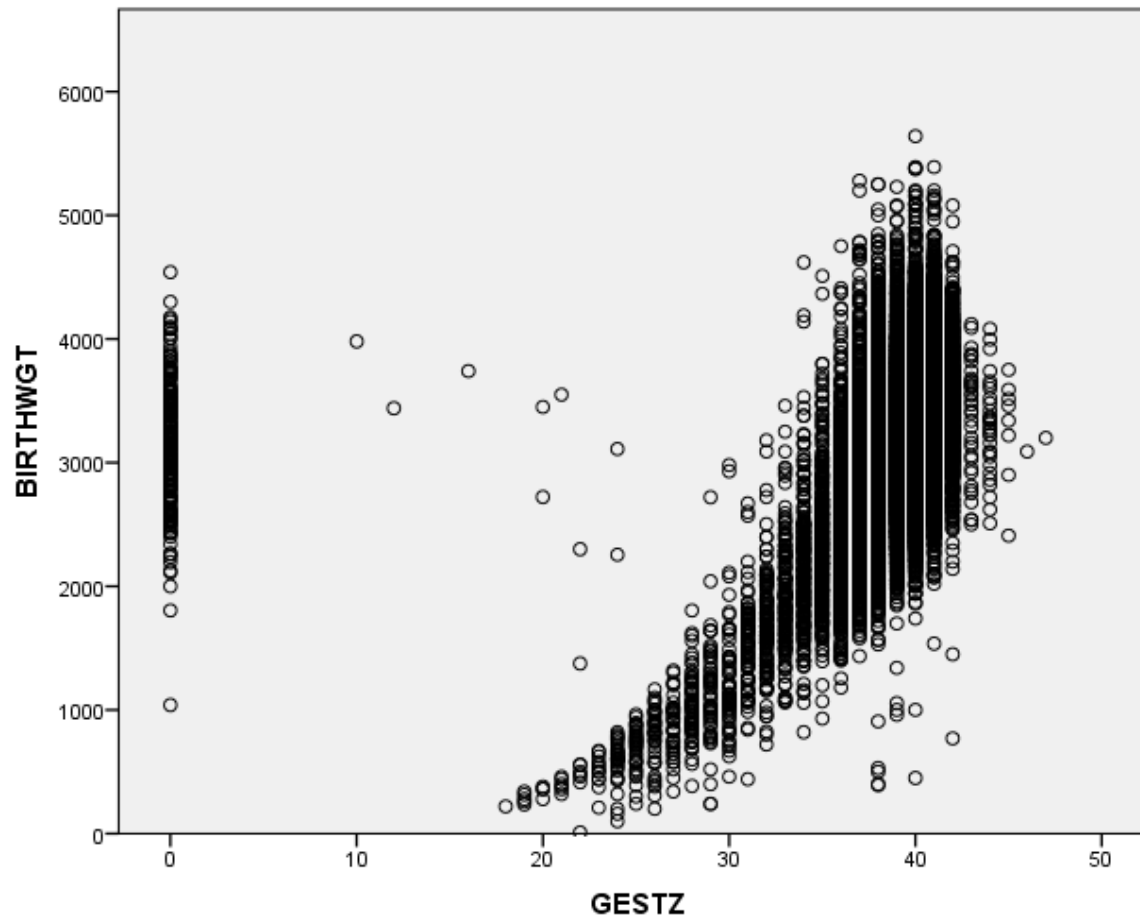
Linked dataset for all births occurring in England from 2005 to 2007 involving:

1. National Health Service (NHS) System used to allocate patient identifier at birth:
Gestational age for live births, ethnic category of the baby, NHS number for the mother and baby, postcode, date of birth of mother and baby
2. Civil registration of births:
Birthweight, country of birth of mother and father, registration status, father's socio-economic status, sex, NHS number of baby, postcode, date of birth
3. Maternity hospital discharge record:
Parity, area deprivation score, clinical information, NHS number of mother, postcode, date of birth of mother

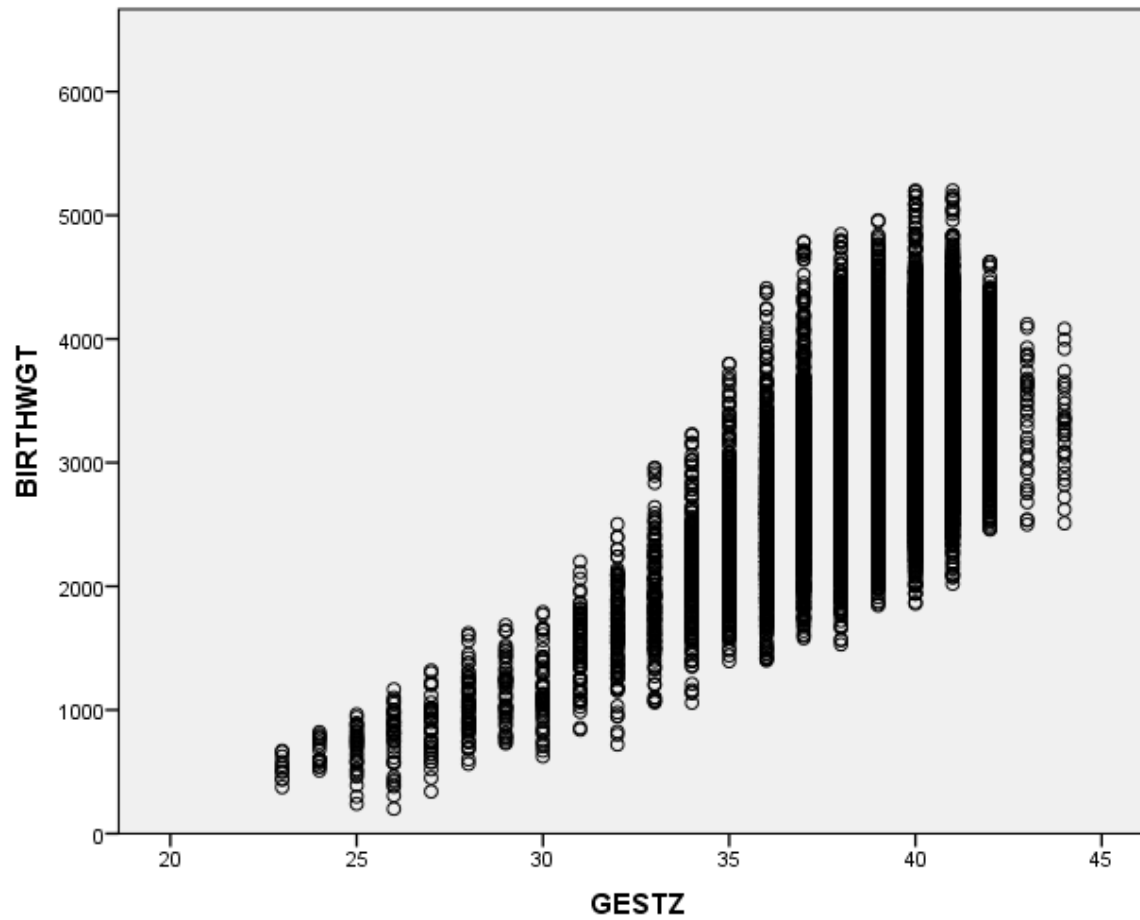
Method (2)

- Singleton babies born between 24 to 42 weeks gestation
- Baby's ethnic group recorded as White British, Pakistani, Bangladeshi, Indian
- Mother's country of birth recorded as England, Pakistan, Bangladesh or India
- Birthweight distribution charts were constructed using GAMLSS models in the software programming language R

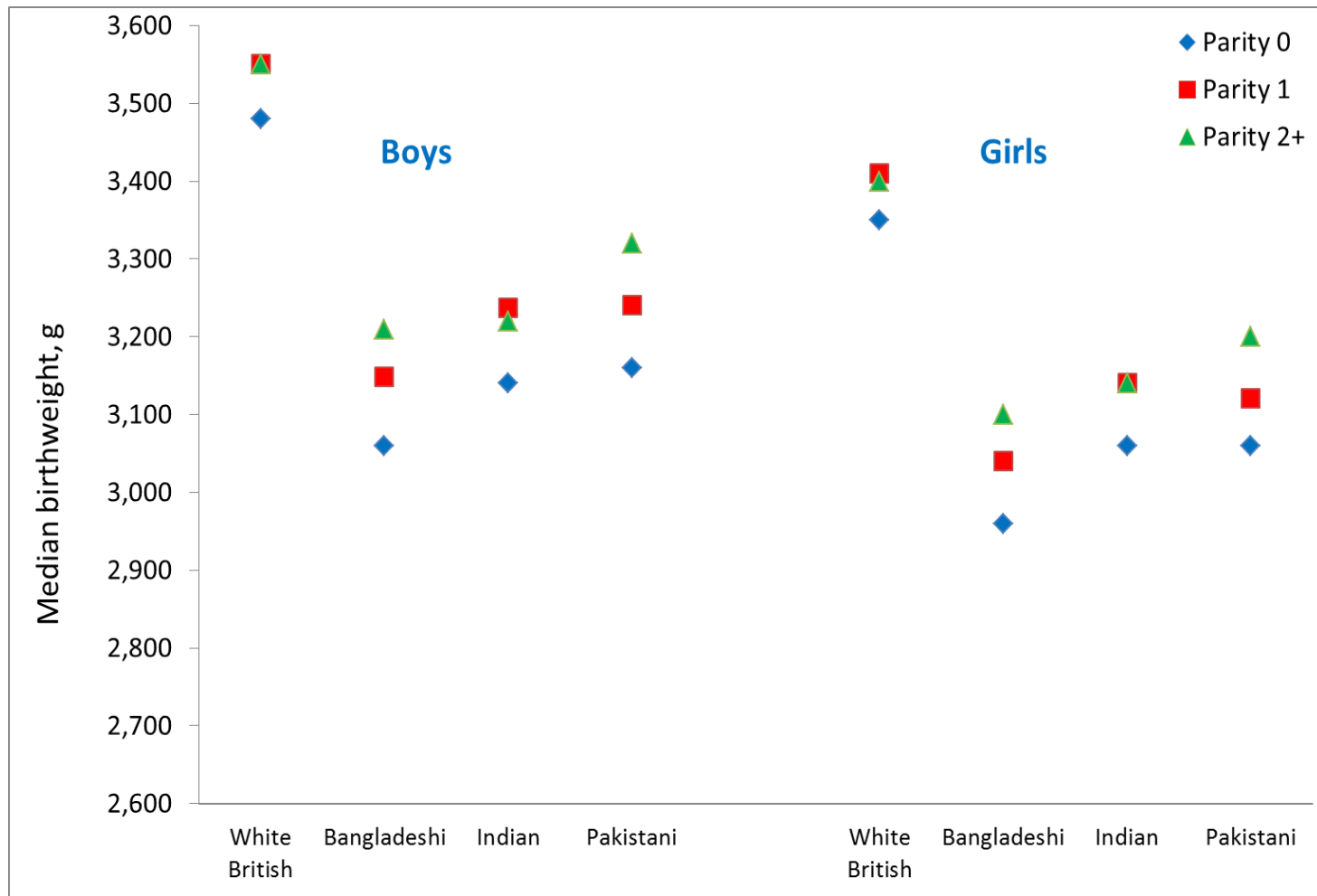
Pakistani babies, England 2005-07 (original data)



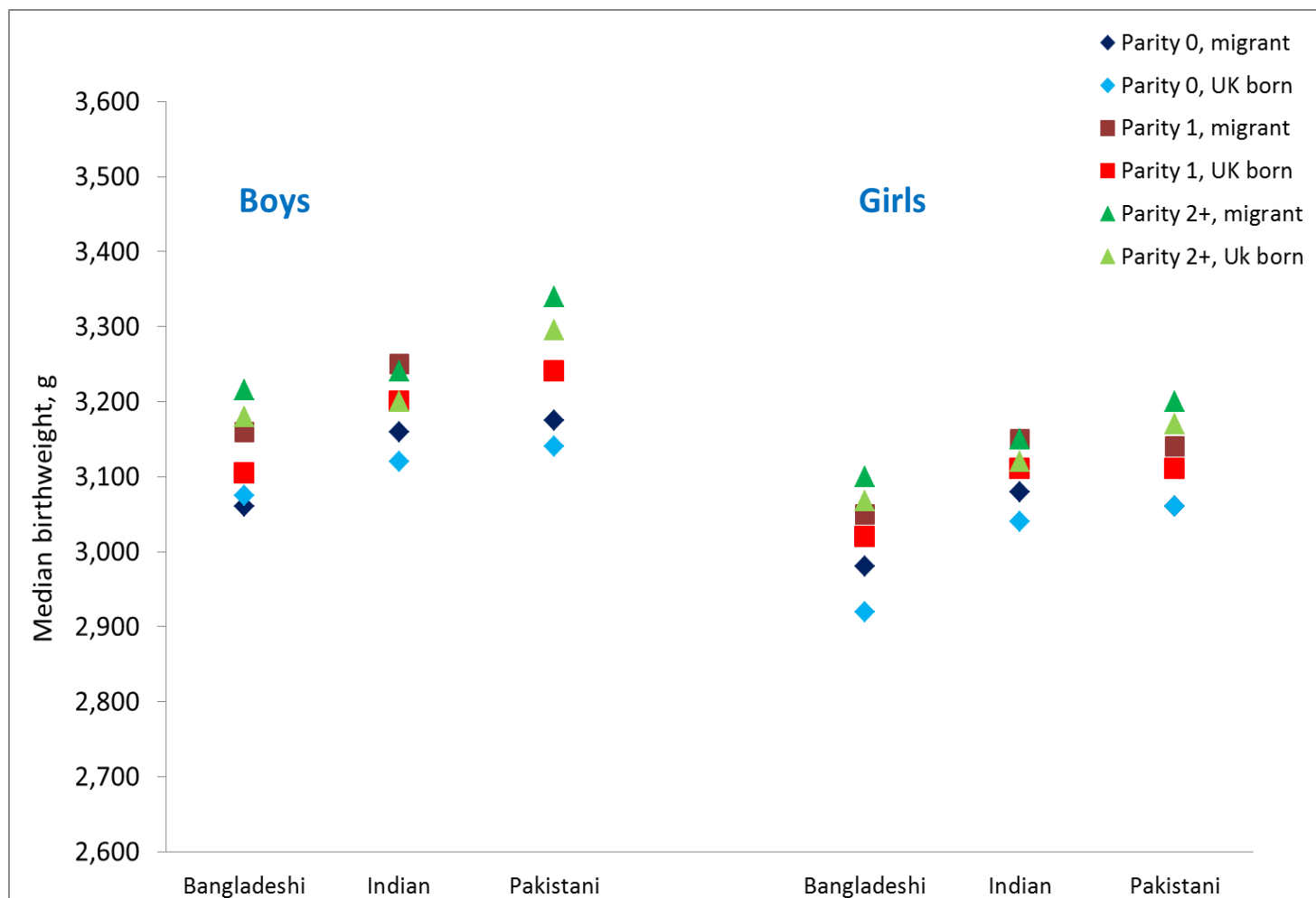
Pakistani babies, England 2005-07 (clean data)



Median birthweight by parity, sex and ethnicity, England

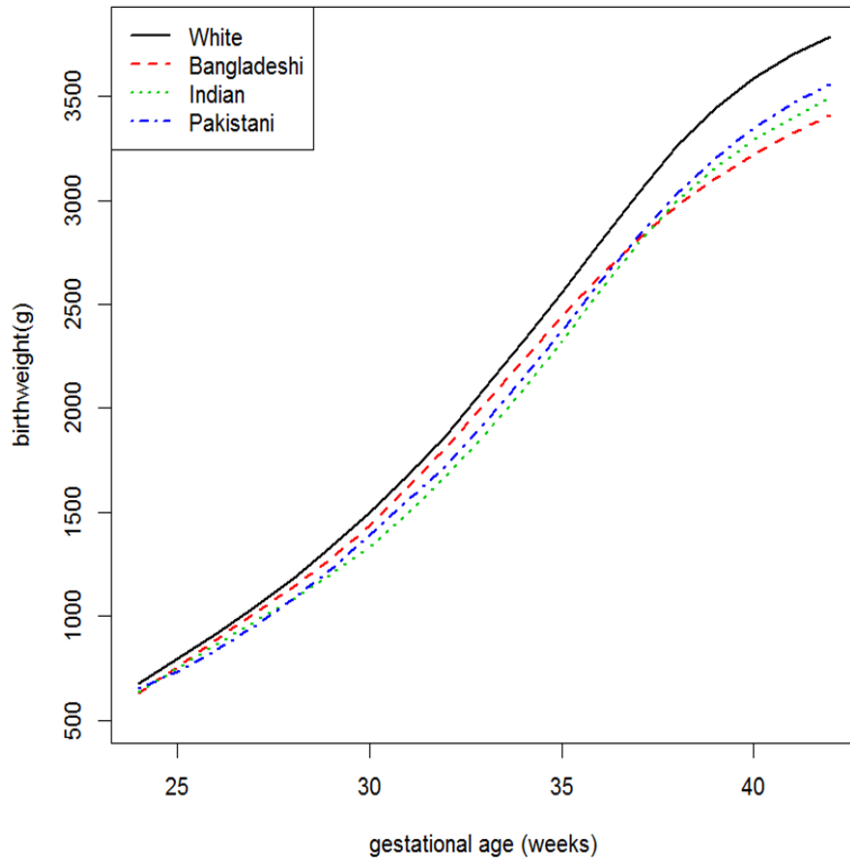


Median birthweight by parity, sex, ethnicity and mother's country of birth, England

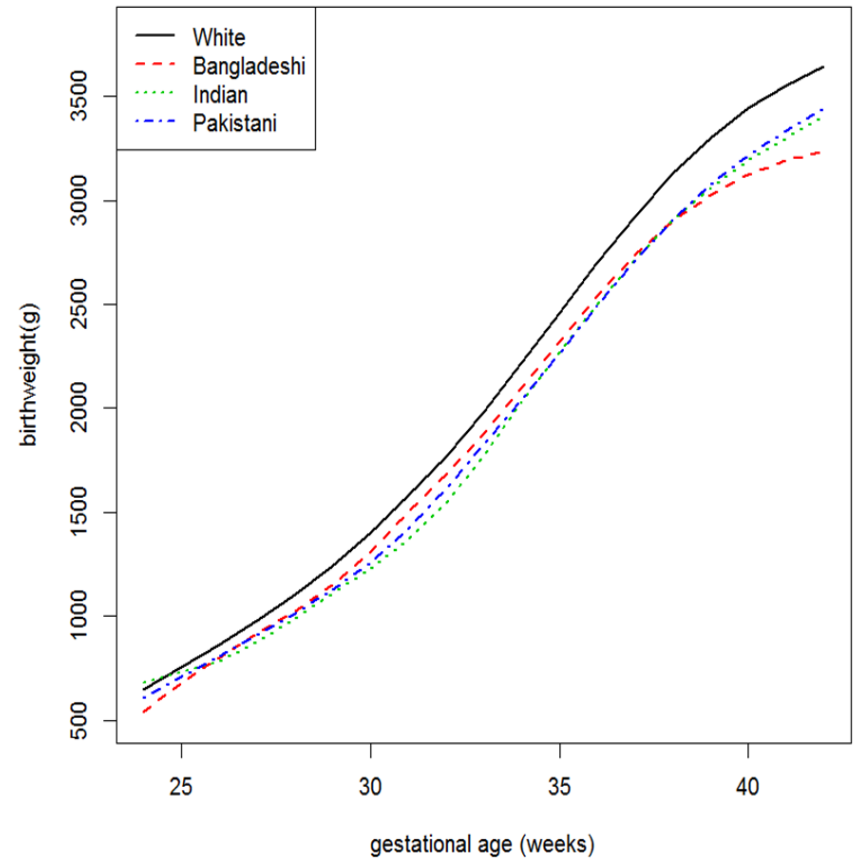


Gestation specific birthweight charts by sex and ethnicity, England

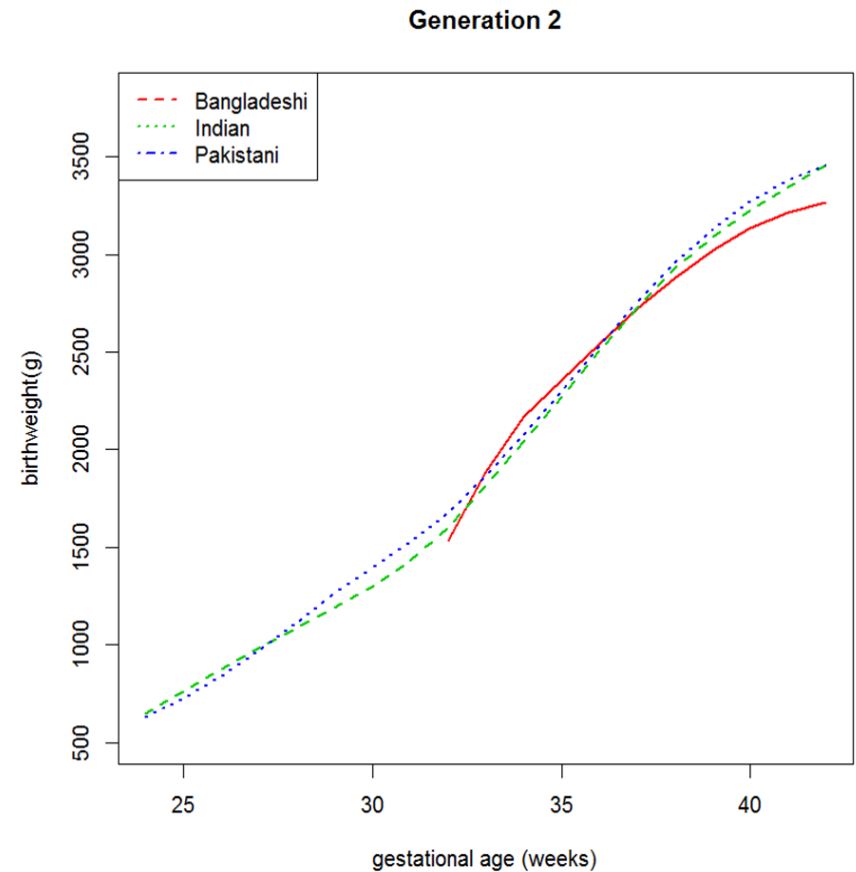
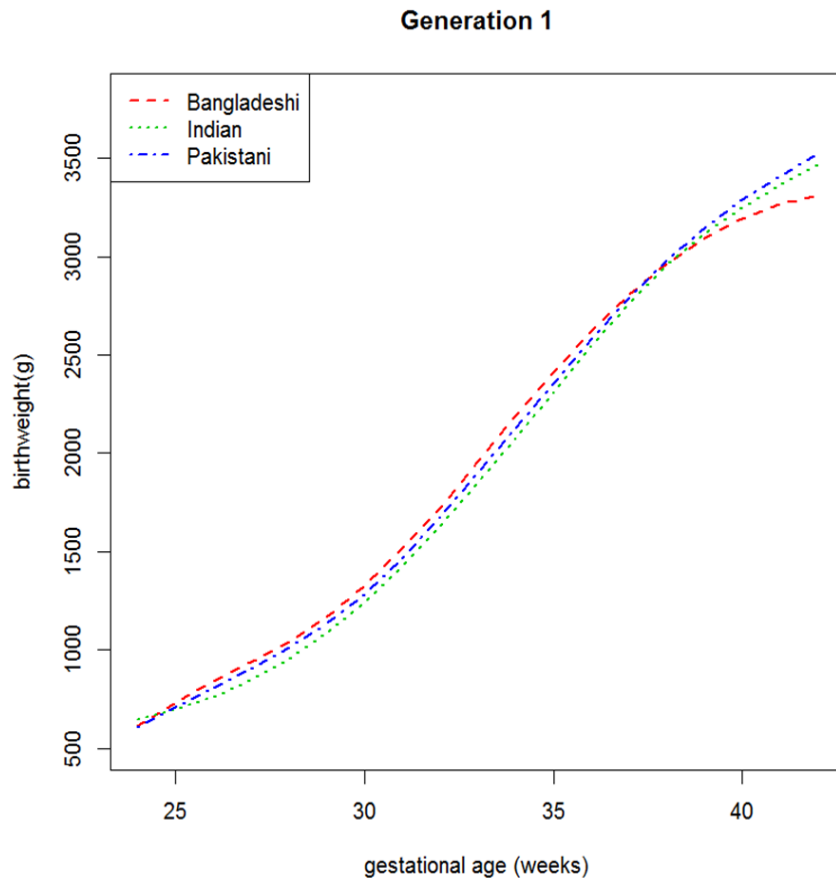
Males



Females



Gestation specific birthweight charts by ethnicity and mother's country of birth, England



Conclusion

- Linkage of administrative data enabled production of gestation –specific birthweight charts
- There are issues with data quality and completeness in using administrative data
- Boys are heavier than girls
- South Asian babies are about 300g lighter than White British babies
- Median birthweight increases with parity for both sexes and all ethnic groups
- There is no significant difference in birthweight for South Asian babies by generation (migrant versus UK born)