Scottish health and ethnicity linkage study of 4.65 million people: Progress and Plans

A collaboration between:

University of Edinburgh,
ISD National Services Scotland,
and General Register Office Of Scotland (GROS)

Presenter

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- All those people, and many others, named in the cohort profile paper (IJE 2010)

- For help with preparing this presentation, Narinder Bansal & Jim Chalmers

- SHIP for inviting SHELS to join the family

Why we should have ethnicity data

To

- measure health inequalities
- monitor impact to reduce inequalities
- respond to legislation and policies on human rights and equality
- develop and test scientific hypotheses on disease causation

Ethnicity data -actuality

- We do not have comprehensive, reliable data by ethnicity anywhere in Europe
- In Scotland and much of Europe we have an information desert, with patches of green
- SHELS is turning into an oasis

Bridging the gap between need and actuality: emergence of SHELS

- Phase 1 30 month (2002-2005)

  Testing methods including name search, country of birth, data extrapolation, linkage (best).

- Phase 2 30 month study (2008-2011) based on linkage.

  4 priority health areas, 7 years of follow-up data;
  list of publications in your conference pack

- Phase 3 24 month study (2011-2013) based on linkage-GI and respiratory plus development of primary care data

Bridging the gap: Census linkage to SMR01 database

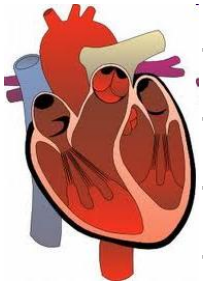
- Census holds self-defined ethnicity
- Hospital discharge databases hold diagnoses and mortality
- We used probability linkage techniques

Fischbacher et al BMC Public Health 2007;7:142

Bhopal et al International Journal of epidemiology 2011 cohort profile.

SHELS Phase 2

- - Angina



- Chest pain
- Myocardial Infarction
- Stroke
- Heart Failure

At first birth

- Maternal characteristics
- Preterm rates & BW

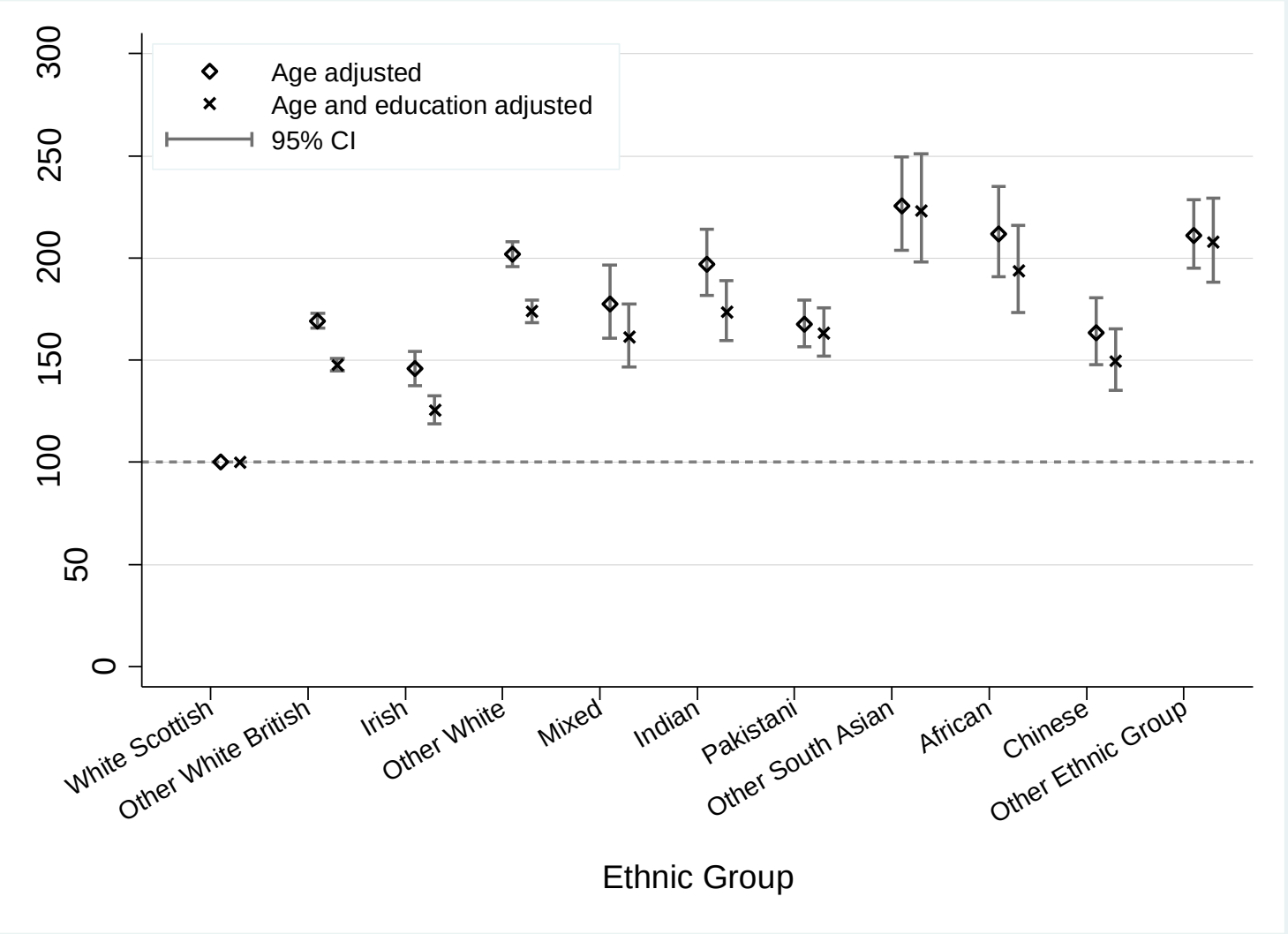
eeding rates

- Lung cancer
- Breast cancer
- Colorectal cancer
- Prostate cancer
- Breastscreening rates

- Mental health admissions
- Detention rates

Does the Scottish effect begin at birth?

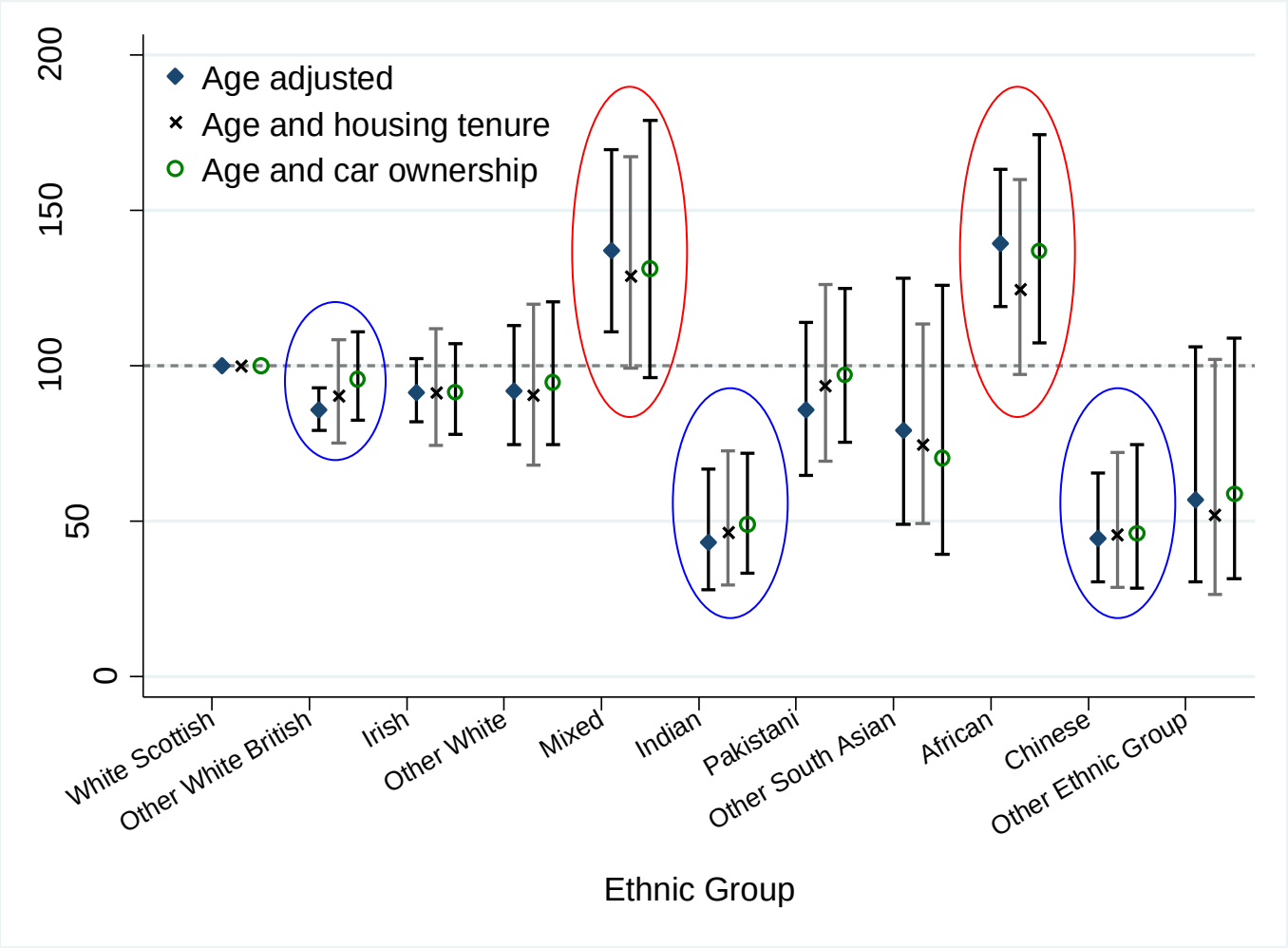
Breast feeding risk ratio (higher is better)



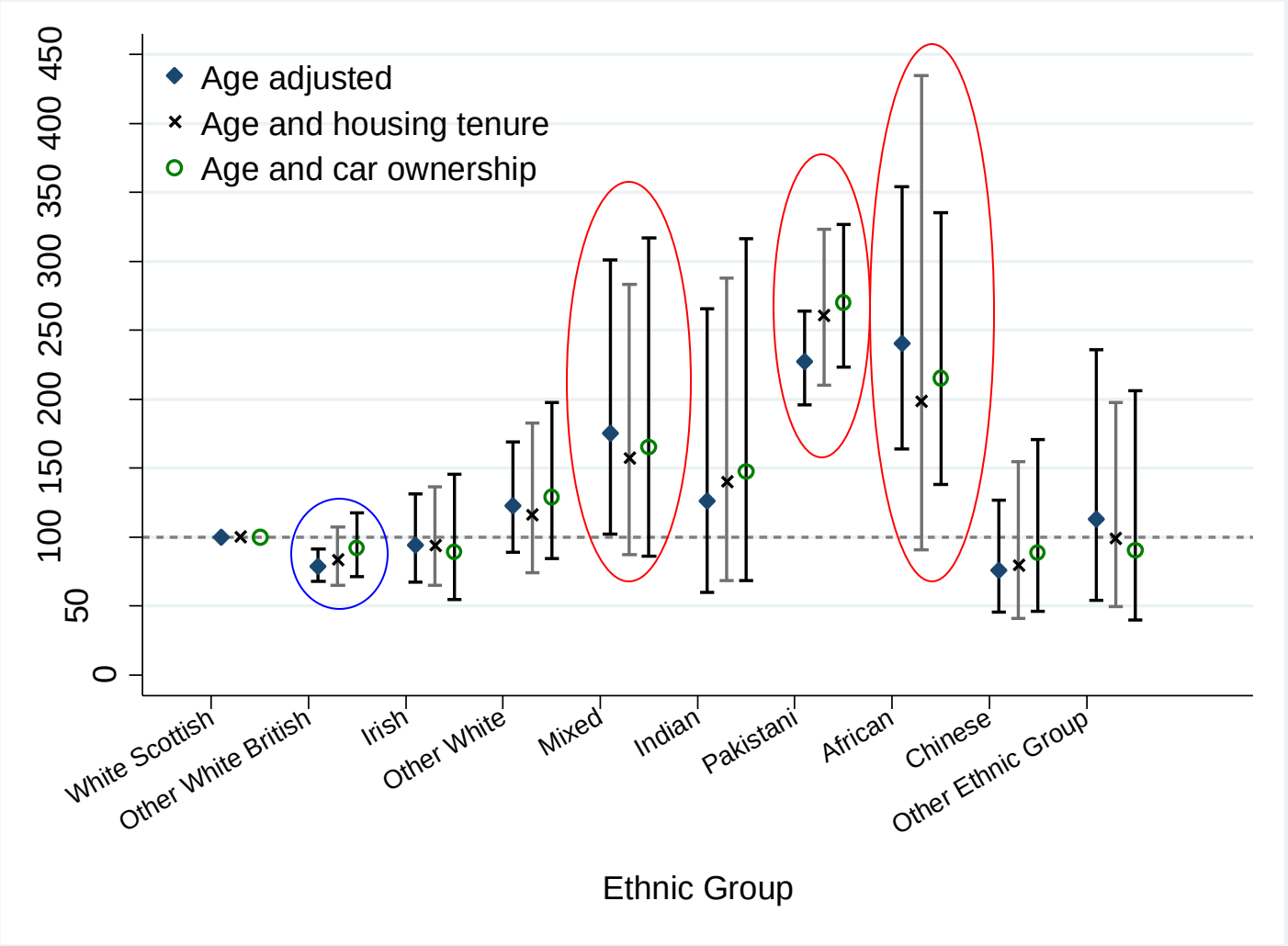
Conclusions

- Confirms relatively poor start in life for White Scottish population

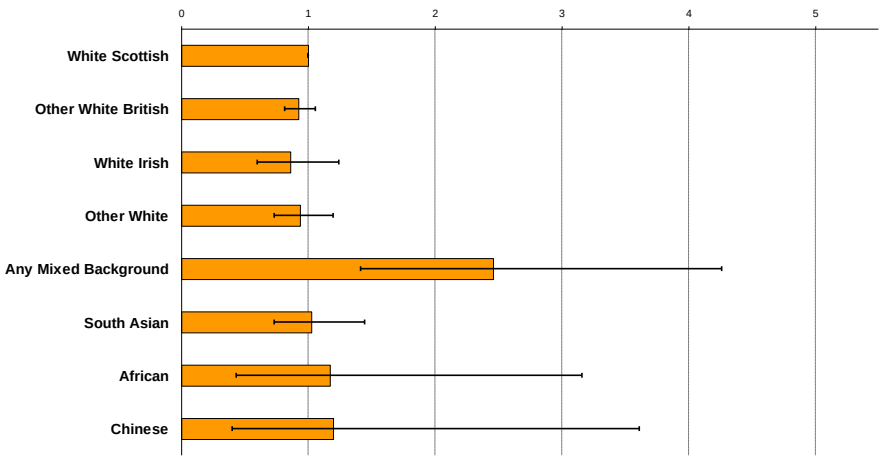
First psychiatric disorder (any diagnosis): Women



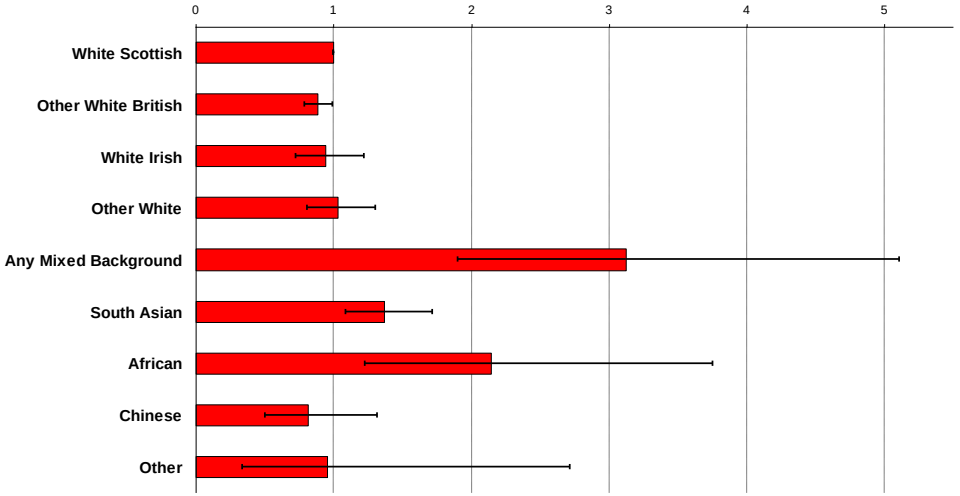
First psychotic disorder : Women



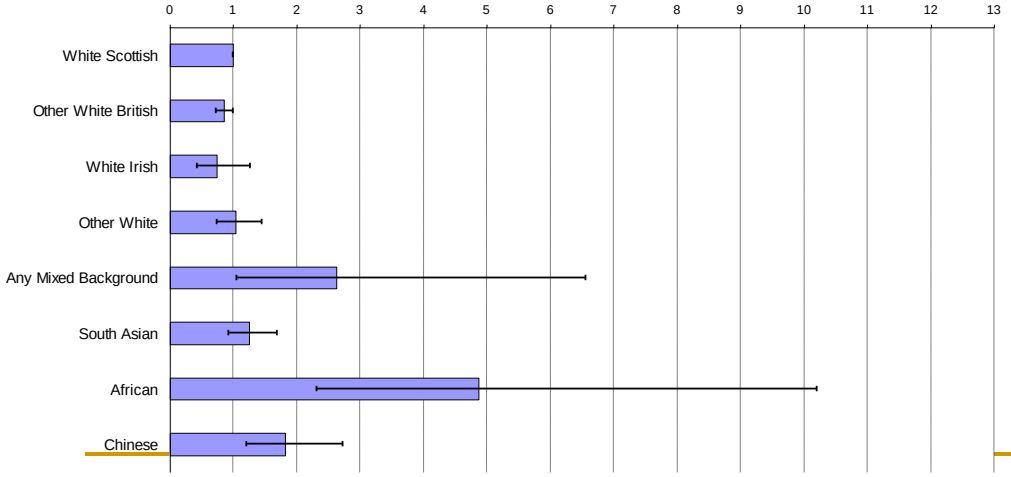
Episodes under Mental Health (Care and Treatment) Act 2003, 2006-2009



1. Emergency detention cert. RR & 95% CI

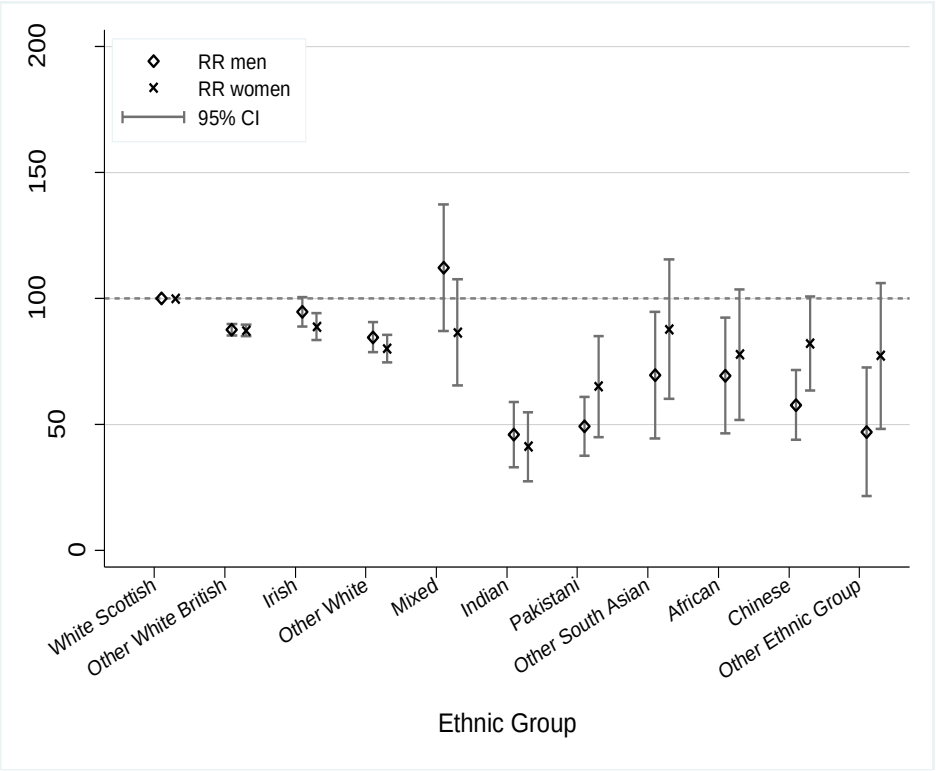


2. Short term detention cert. RR & 95% CI



3. Compulsory Treatment Orders, RR & 95% CI

Any cancer: age standardised rate ratio by ethnic group



Overview of key CVD findings

- Best cardiovascular health is in the Chinese in Scotland
- Generally poorer health outcomes in White Scottish and better in OWB (mainly English)
- Poorer CV health in Pakistanis, especially, at every stage of cardiovascular disease from chest pain/angina, two MI to heart failure, but not mortality from MI.
- Socioeconomic indicators as confounding variables– ethnic group and health outcome specific

Progress with phase 3

- Gastrointestinal and respiratory data are almost ready for analysis
- 10 general practices in Glasgow and Edinburgh have agreed in principle to provide risk factor and asthma data-data extraction imminent
- Project completion- spring 2013

Plans for phase 4 (funding applications in preparation)

- All-cause mortality
- All-cause hospitalisation
- Infectious diseases, including linkage of Health Protection Scotland viral infections databases
- Colorectal screening data

Long-term goals

- Easier access to SHELS for researchers either within SHELS safe haven or another safe haven
- Linkage to 2011 census to acquire information on ethnic groups we know little about e.g. Polish, Gypsy Travellers, Arabic populations etc
- Large-scale primary-care linkage, especially for risk factor data