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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Acknowledgements

- 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
SHELS Phase 2

- Angina
- Chest pain
- Myocardial Infarction
- Stroke
- Heart Failure

At first birth
- Maternal characteristics
- Preterm rates & BW
- Breastfeeding 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

Age adjusted
Age and housing tenure
Age and car ownership

Ethnic Group

White Scottish
Other White British
Irish
Other White
Mixed
Indian
Pakistani
African
Chinese
Other Ethnic Group
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

- White Scottish
- Other White British
- Irish
- Other White
- Mixed
- Indian
- Pakistani
- Other South Asian
- African
- Chinese
- Other Ethnic Group

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<th>Ethnic Group</th>
<th>RR men</th>
<th>RR women</th>
<th>95% CI</th>
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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