New estimates of ethnic mortality in the UK – resolving the debate

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ICPG 2015–University of Queensland
6A ETHNICITY & SEGREGATION 2: INEQUALITY AND DEPRIVATION 2nd July 11.00–12.30 Room 219

NewETHPOP–Evaluation, Revision and Extension of Ethnic Population Projections
ESRC, ES/L013878/1, 1 Jan 2015 to 31 May 2016
PI: Philip Rees· Co-I: Pia Wohland, Paul Norman, Nikolas Lomax
Growth of ethnic diversity

England and Wales

How has ethnic diversity grown 1991-2001-2011
S Jivraj - Manchester: Centre on Dynamics of Ethnicity (CoDE), 2012

Total population - 56,076,000

2011
- 1% 4%
- 80%
Total population - 52,841,000

2001
- 1% 3%
- 87%
Total population - 50,748,000

1991
93% (includes White Irish and White Other)

White Irish
White Other
White British
Non-White

2011 Census estimates
(% change from 2001 shown in brackets):

- Indian 1,412,958 (+34%)
- Pakistani 1,124,511 (+55%)
- African 989,628 (+100%)
- Caribbean 594,825 (+4%)
- Bangladeshi 447,201 (+56%)
- Chinese 393,141 (+69%)

Mixed:
- White-Caribbean 426,715 (+78%)
- White-African 165,974 (+106%)
- White-Asian 341,727 (+78%)
- Mixed Other 289,984 (+83%)

Other:
- Other Asian 835,720 (+238%)
- Other Black 280,437 (+186%)
- Arab 230,600 (see note)
- Other 333,096 (+46%)

How has ethnic diversity grown 1991-2001-2011
S Jivraj - Manchester: Centre on Dynamics of Ethnicity (CoDE), 2012
Life expectancy at birth - men – 2001-National level

Standardised illness ratio method

<table>
<thead>
<tr>
<th>Group</th>
<th>Life Expectancy</th>
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<tr>
<td>Bangladeshi</td>
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<td>Chinese</td>
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Migrant/ethnic group mortality in the literature

- Covering the total population (Census or LS)
- Ethnic groups or immigrants
- 1971 (country of birth question in the census for first time) to 2001
Migrant/ethnic group mortality in the literature

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<thead>
<tr>
<th>First Author</th>
<th>Marmot</th>
<th>Wild</th>
<th>Wild</th>
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<td>1-79</td>
<td>20+</td>
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</table>
Migrant/ethnic group mortality

- Scottish, Irish, Northern Irish have higher mortality
- Other White group has lower mortality
- Healthy migrant effect (e.g. Caribbean group)

Conclusions for improvement

- Consider healthy immigrant effect -> separate ethnic group life tables for those born in the UK and those born outside the UK
- Use additional data sources
- Keep constrains to actual number of deaths
What happened between 2001 and 2011?

- GWM Geographically weighted method
- GDM Geographical distribution method

Estimates of the national mortality rates for each ethnic group is generated thus

\[
m_{exg}^{c(i,c)} = \sum_i \left\{ m_{xg}^{i(c)} \left( \frac{P_{exg}^{i(c)}}{\sum_i P_{exg}^{i(c)}} \right) \right\}
\]

The local mortality estimate is as follows:

\[
m_{exg}^{i(c)} = \left( \frac{m_{xg}^{(c)} P_{xg}^{i(c)}}{\sum_s m_{exg}^{c} P_{exg}^{i(c)}} \right)
\]

Where we compute the ratio of observed deaths in a local area \(i(c)\) to expected deaths applying national ethnic specific mortality rates to local ethnic populations to modify the national ethnic group mortality rates.
Life expectancy at birth women English local areas - GEOGRAPHICAL DISTRIBUTION METHOD (GDM) -
What happened between 2001 and 2011

2011

2001

Life expectancy in years

BAN Asian/Asian British: Bangladeshi
BLA Black/African/Caribbean/Black British: African
BLC Black/African/Caribbean/Black British: Caribbean
CHI Asian/Asian British: Chinese
IND Asian/Asian British: Indian
OAS Asian/Asian British: Other Asian
OAT Other ethnic group: Any other ethnic group
OBL Black/African/Caribbean/Black British: Other Black
OMI Mixed/multiple ethnic group: Other Mixed
PAK Asian/Asian British: Pakistani
WAS Mixed/multiple ethnic group: White and Asian
WBA Mixed/multiple ethnic group: White and Black African
WBC Mixed/multiple ethnic group: White and Black Caribbean
WHO White: English/Welsh/Scottish/Northern Irish/British
WIR White: Irish
How does life expectancy vary between UK born (red) and abroad born (black) population
Findings

• Between 2001 and 2011 life expectancy increased for all ethnic groups, but not all to the same extend
• Large variation across local areas
• Pakistani women have the lowest life expectancy in 2011/least improvement over the decade
• White Others have the highest life expectancy in 2011
Findings and conclusions

- Life expectancy by nativity (UK born/foreign born) shows lower life expectancy for UK born population
- No significant differences between foreign born and UK born population
- Variation across groups not large at the moment, but significant between some UK born groups
Conclusion

- Healthy migrant effect apparent
- Confirms importance to distinguish population by nativity
- GDM method works

Outlook
- Analyse men
- To increase foreign born population size
  - Pool to person data
  - Pool ethnic groups
THANKS!

Project webpage: [https://www.ethpop.org/](https://www.ethpop.org/)
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Pia.Wohland@hyms.ac.uk (1.8.2015)