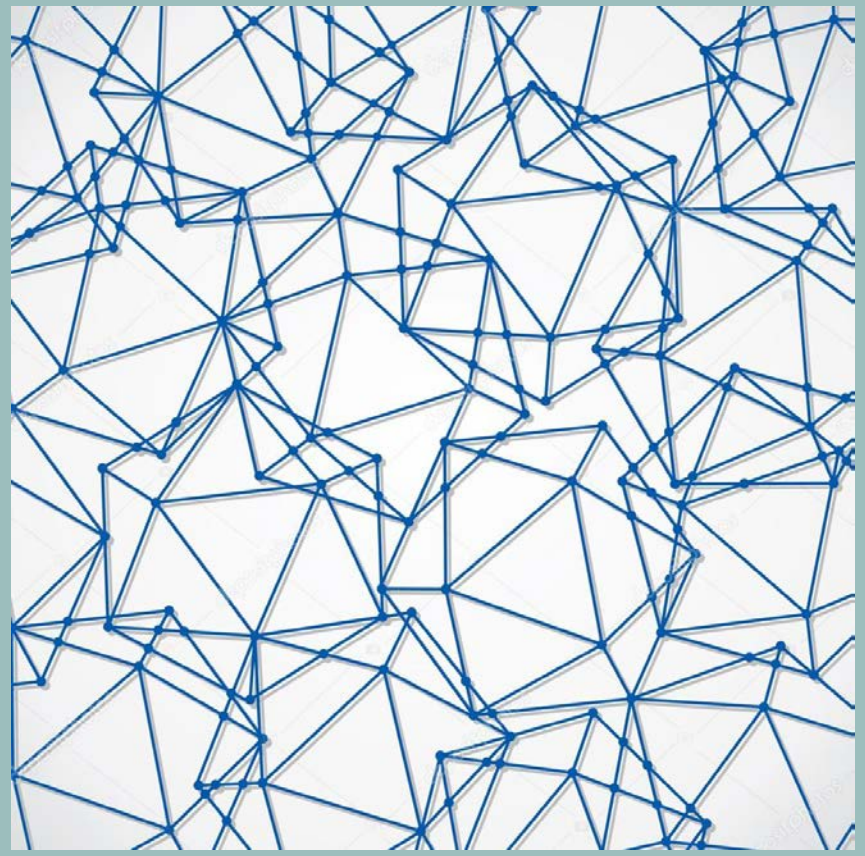


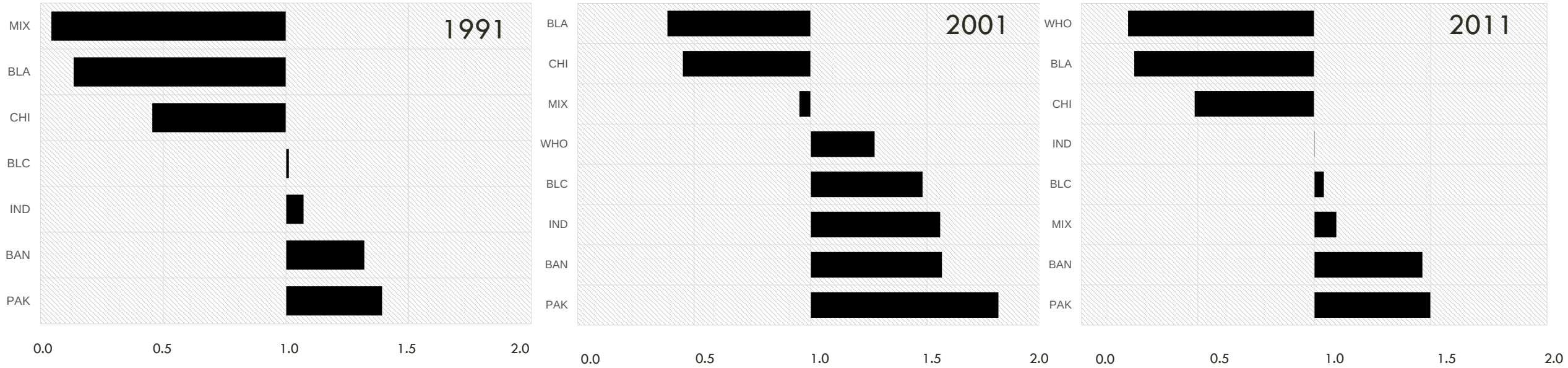
USING CENSUS MICRODATA TO EXPLORE THE INTER-RELATIONSHIPS BETWEEN ETHNICITY, HEALTH, SOCIOECONOMIC FACTORS & INTERNAL MIGRATION

Fran Darlington-Pollock (University of Liverpool) [F_Darlington]

Paul Norman (University of Leeds)
Dimitris Ballas (University of Groningen)

… 'SIGNIFICANT GAP IN CURRENT EVIDENCE AND POLICY'…

Rate ratio of SIRs (limiting long-term illness) for ethnic minority groups relative to White (91) and White British (01/11)



Black Caribbean
Indian
Bangladeshi
Pakistani

Black Caribbean
Indian
Bangladeshi
Pakistani

+ White Other

Black Caribbean

Bangladeshi
Pakistani

+ Mixed & Other

Source: Darlington-Pollock and Norman, 2017

COMPLEX INTER-RELATIONSHIPS

HEALTH

- Majority of migrants are young & relatively healthy
- Some people may / may not move because of their health
- A migrant's health may be affected by the process
- Migrants may spread disease

- Gradient of health status along deprivation gradient
- Healthy people live in less deprived locations & *vice versa*

DEPRIVATION

MIGRATION

- More advantaged people tend to migrate to or between less deprived, more attractive locations
- Less advantaged people tend to drift into (or be trapped in) more deprived locations

SELECTIVE SORTING AND CHANGING HEALTH GRADIENTS

Area A

- Lower social classes
- Overcrowding
- Less green space
- High unemployment
- Poorer health

- Differences in health between migrants and non-migrants?
- Differences in health between the migratory flows?
- Size of the migratory flows?
- Health of those 'left behind'?
- Demographic and socioeconomic attributes of migrants and non-migrants?

Area B

- Higher social classes
- More sparsely populated
- More green space
- Low unemployment
- Better health

WHAT CAN WE ASK OF CENSUS MICRODATA?

- Does selective sorting appear to operate differently for different ethnic groups?

- Can selective sorting contribute to changing ethnic health gradients?

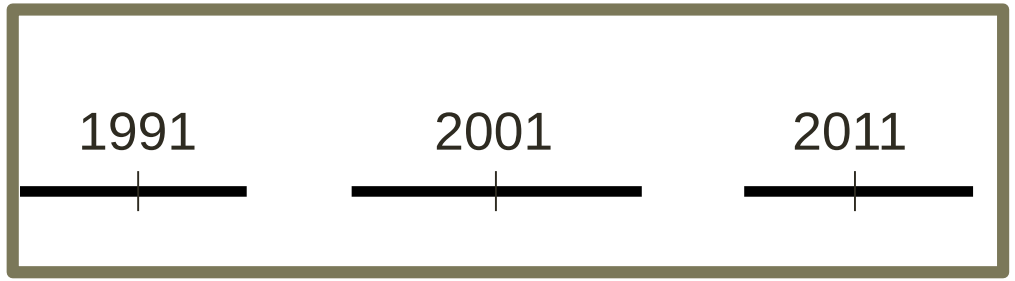
Cross-sectional Samples of Anonymised Records

- Are different ethnic groups comparably mobile?
- Does the relationship between health and migration hold across ethnic groups and by age?

ONS Longitudinal Study

- What is the patterning to health of differently mobile groups?
- How does the movement of differently mobile groups influence overall health gradients?

CROSS-SECTIONAL & LONGITUDINAL CENSUS MICRODATA



	Samples of Anonymised Records	ONS Longitudinal Study
Sample	England Household Residents	England Household Residents
Time scale	1991, 2001, **2011**	1991-2001, **2001-2011**
Key Variables	Migrants (1 year migration indicator) LLTI Social Class Ethnic Group Age	Migrants (10 year migration indicator) LLTI Social Class Deprivation Quintile (Q1 – Q5) Ethnic Group Age

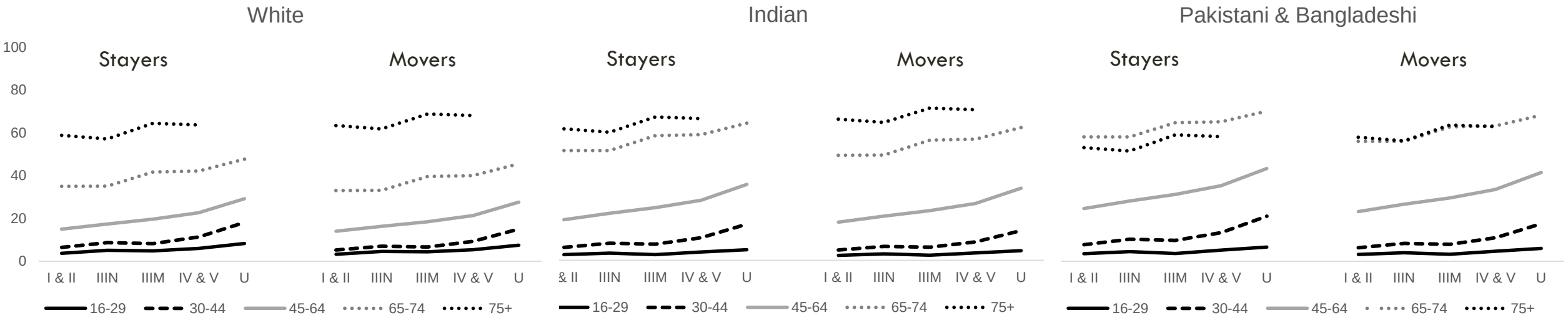
COMPARABLY MOBILE?

% of population	White	Black Caribbean	Black African	Indian	Pakistani & Bangladeshi	Total Population*
Stayer	89.4	90.5	81.9	88.1	90.2	88.9
Mover	10.6	9.5	18.1	11.9	9.8	11.1
Of Movers						
Short Distance	71.8	79.7	76.3	70.4	79.3	72.4
Mid Distance	21.1	16.7	17.1	21.6	14.8	20.5
Long Distance	7.2	4.2	6.6	8.0	5.9	7.1

Source: Samples of Anonymised Records, 2011; *includes Chinese, Mixed & Other

EXPLORING THE HEALTH-MIGRATION RELATIONSHIP

Modelled Probability of LLTI by mover status, age and social class, stratified by ethnic group

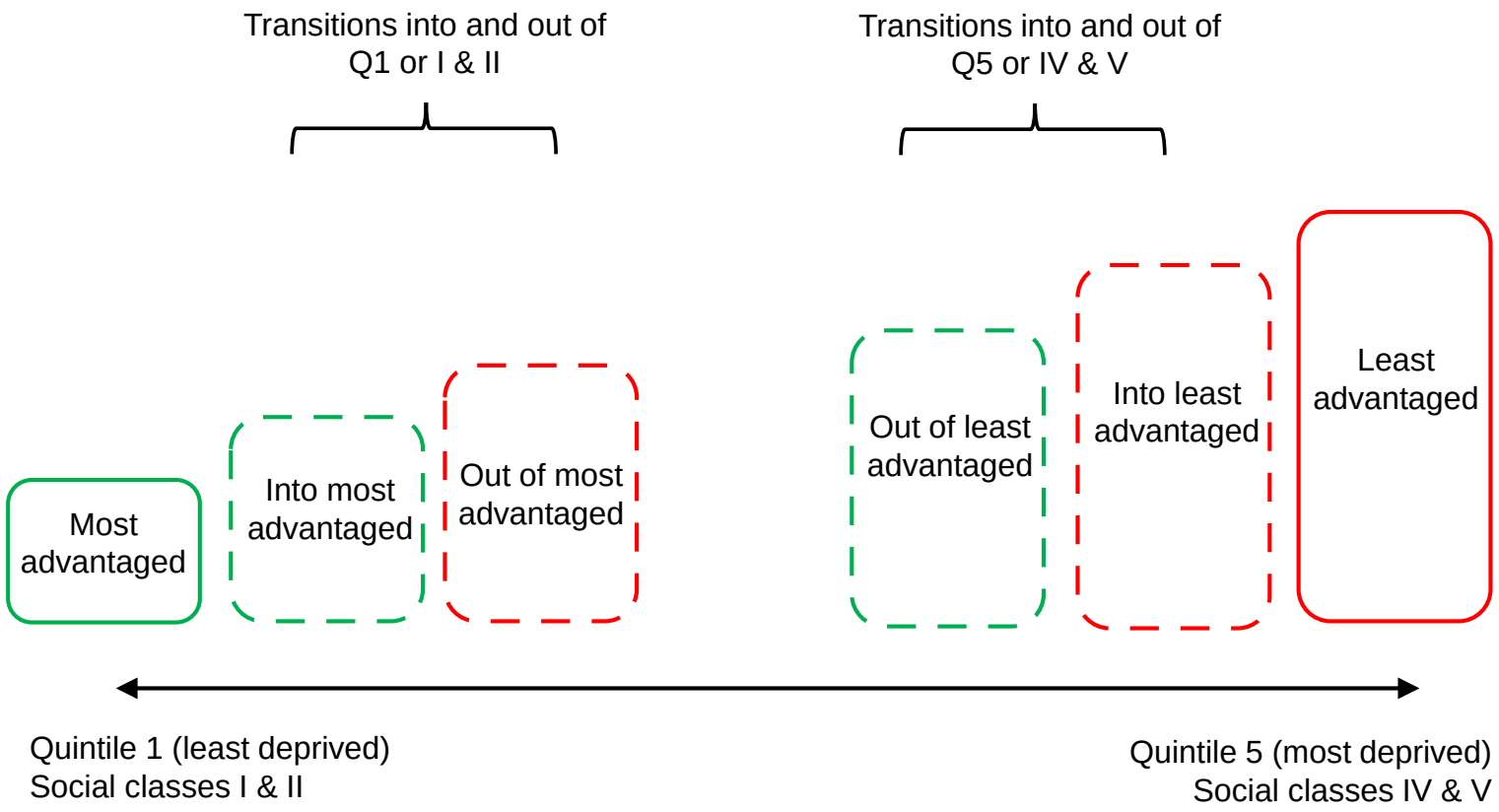


Source: Samples of Anonymised Records, 2011

- Movers in younger ages in **better health** than immobile peers
- Movers aged 75+ have **poorer health** than immobile peers
- Consistent social gradient to health across ethnic groups… but magnitude of influence varies

- MEGs aged 16-29 **better health** than White peers, but the health advantage not maintained for older ages

PATTERNING TO HEALTH: IMPACT ON HEALTH GRADIENTS

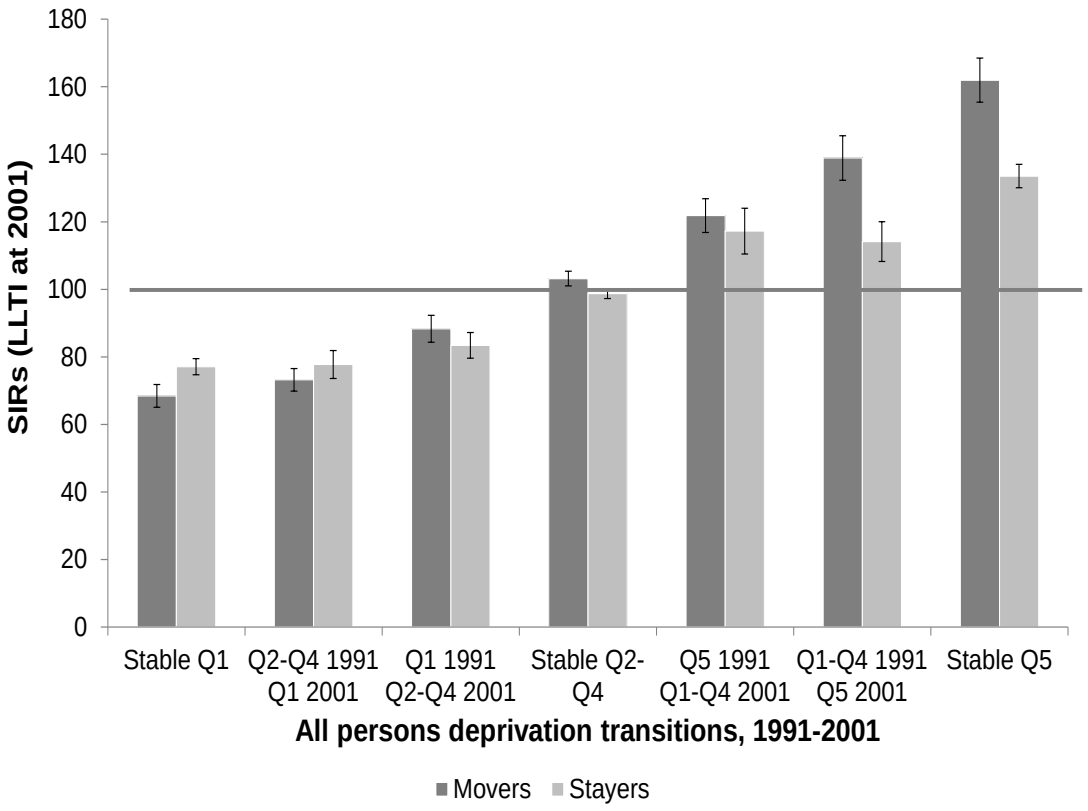


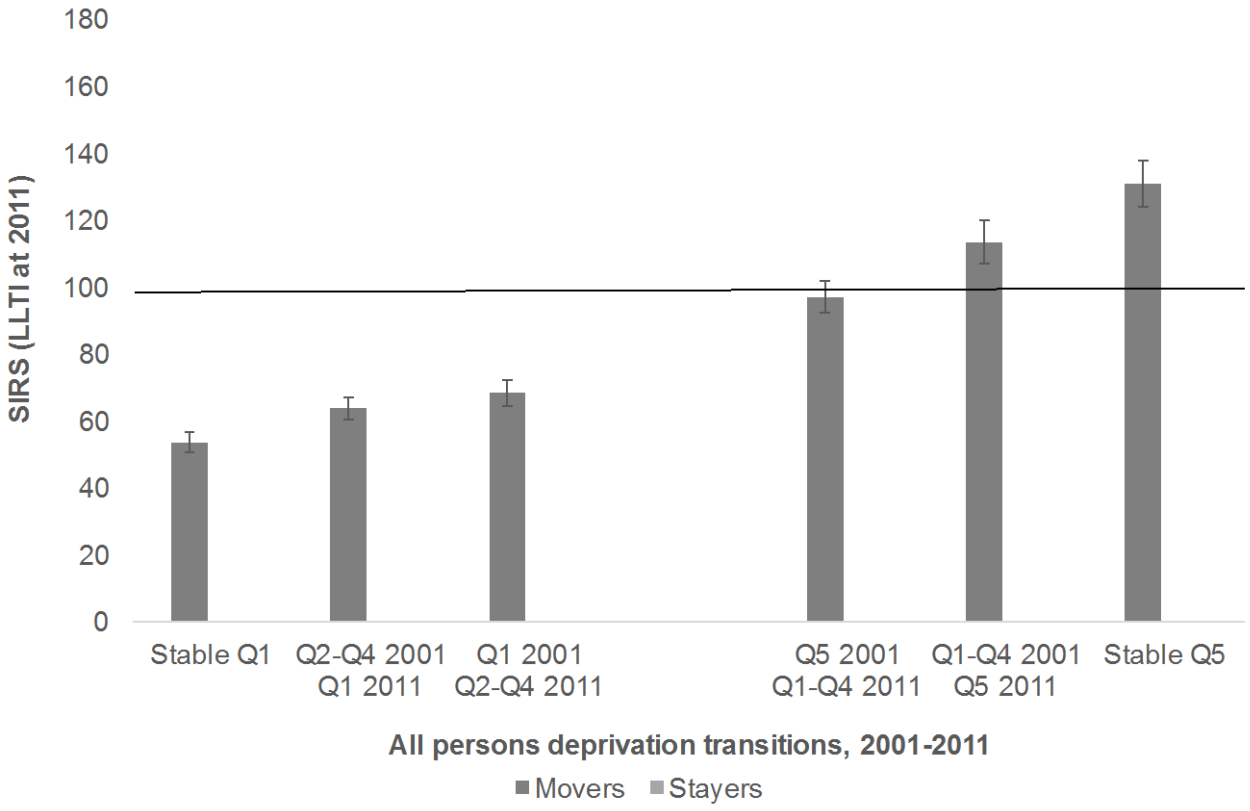
Widening health gradients?

Maintaining health gradients?

Narrowing health gradients?

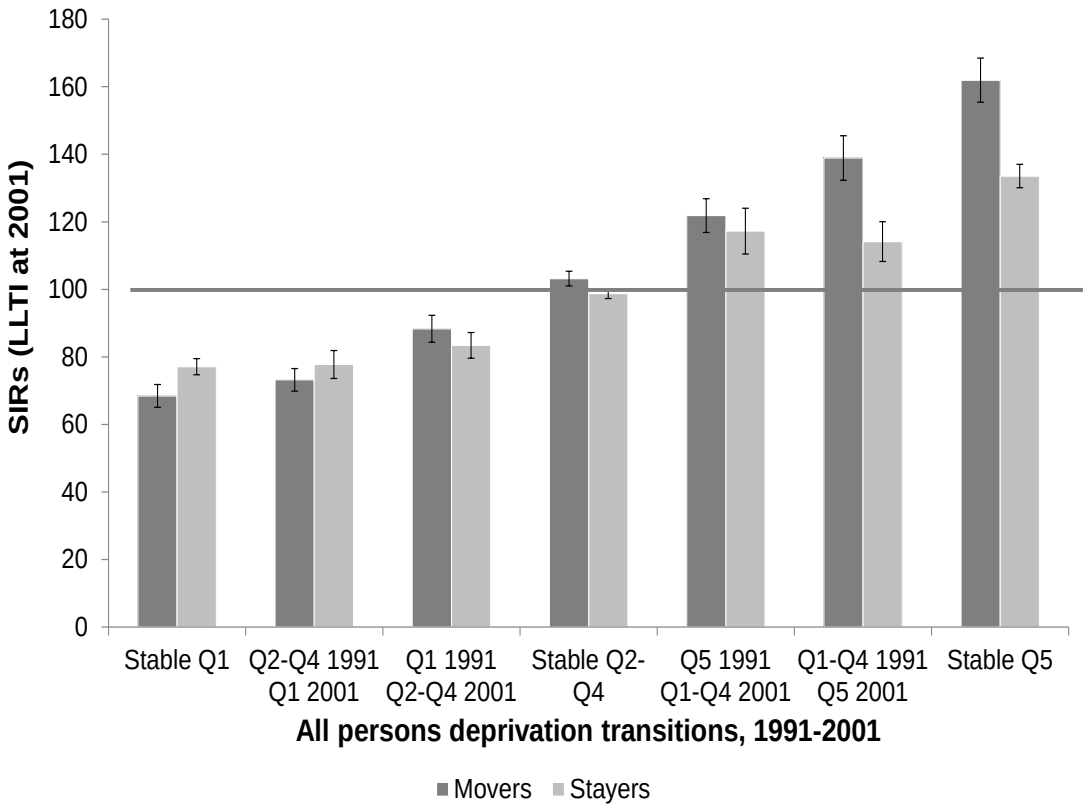
COMPARING TRANSITIONING GROUPS: TOTAL POPULATION

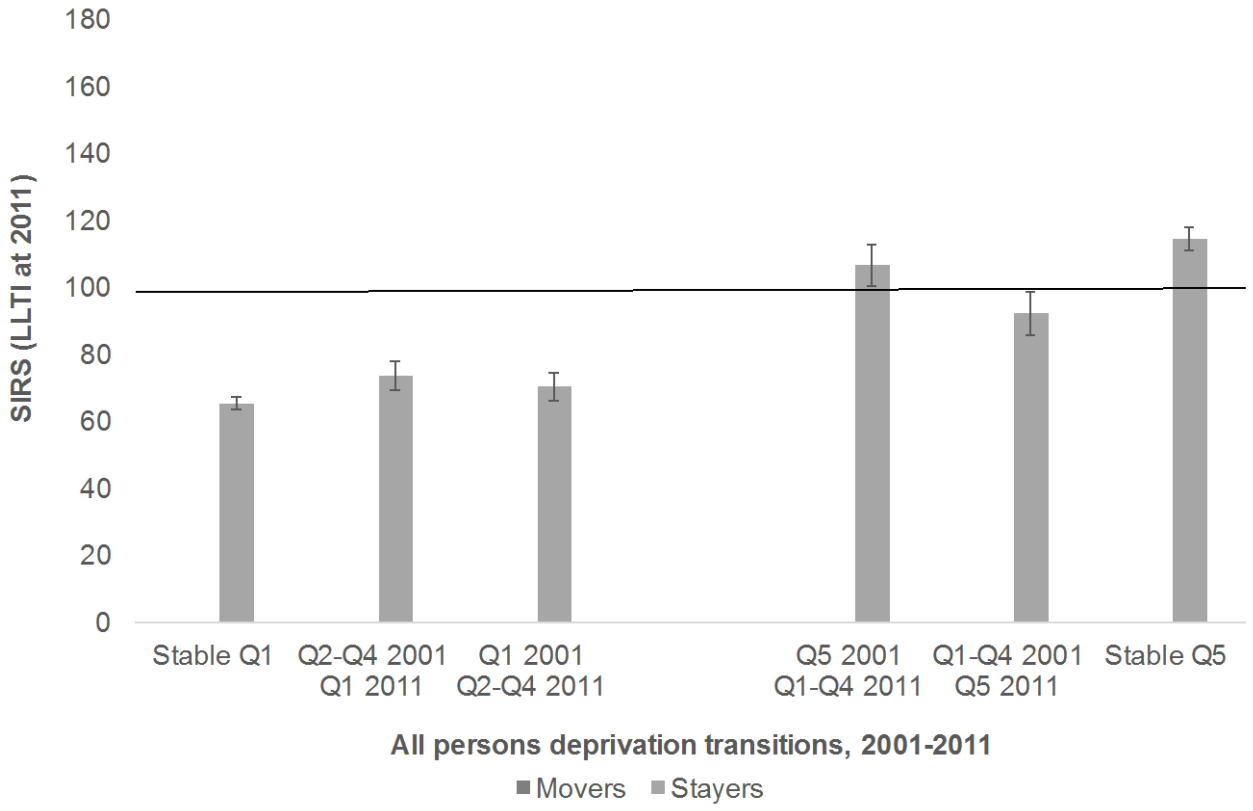




Source: ONS Longitudinal Study

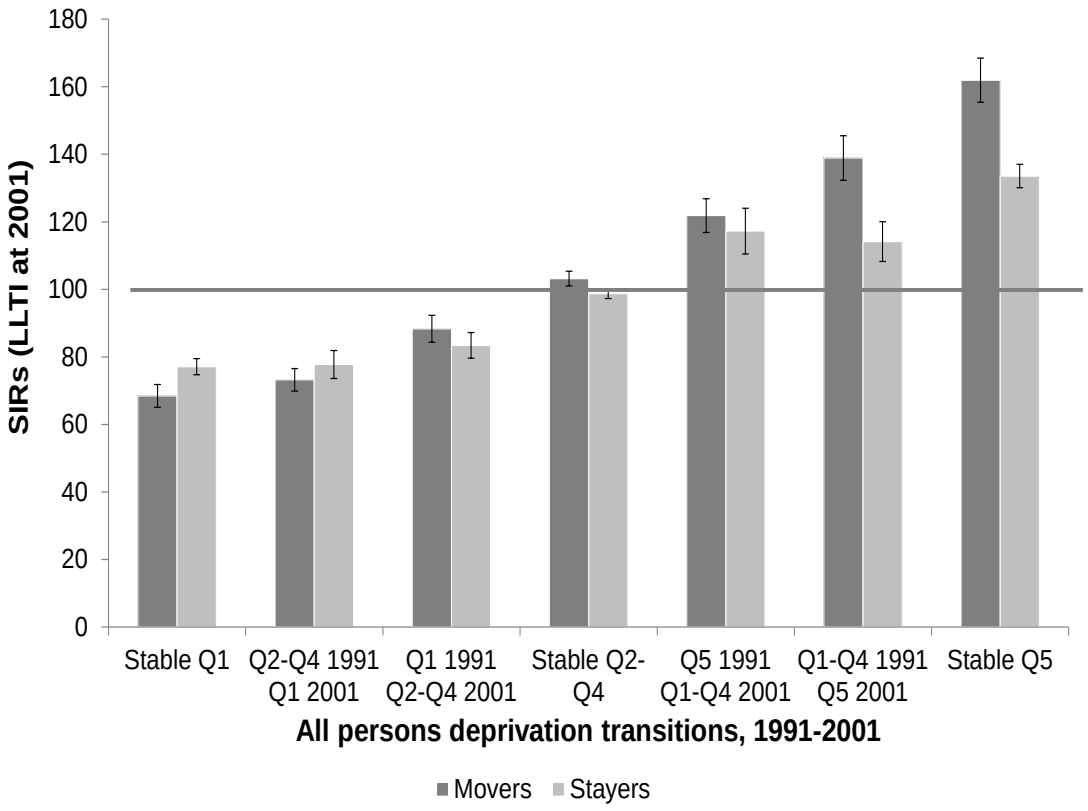
COMPARING TRANSITIONING GROUPS: TOTAL POPULATION





Source: ONS Longitudinal Study

COMPARING TRANSITIONING GROUPS: TOTAL POPULATION



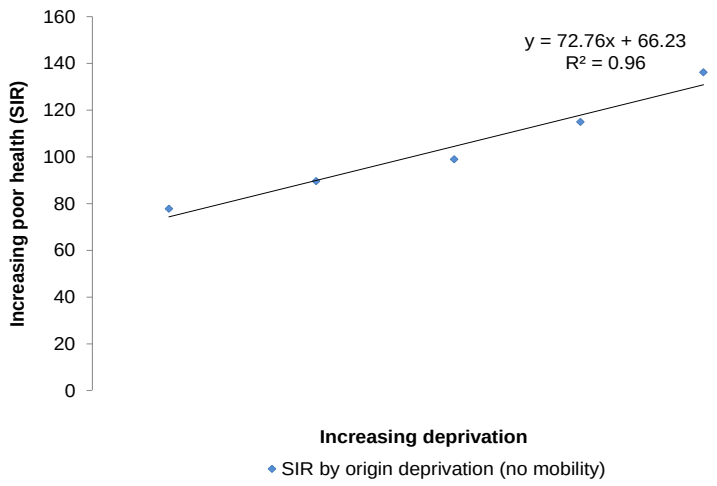
Source: ONS Longitudinal Study

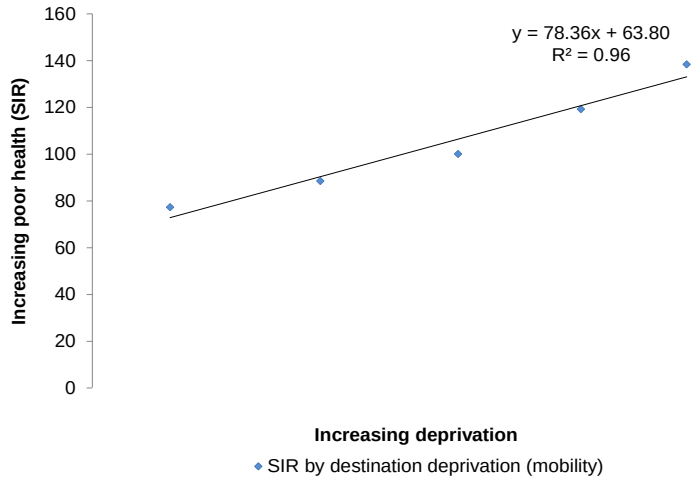
COMPARING TRANSITIONS: ETHNIC DIFFERENCES?

SIRs	Total			Indian			Pakistani & Bangladeshi		
	Mover	Stayer	Total	Mover	Stayer	Total	Mover	Stayer	Total
Stable Q1	53.7*	65.4*	62.8*	30.1*	56.4*	51.7*	57.8	136.9	118.0
Q2-Q4 2001 Q1 2011	63.6*	73.7*	67.8*	59.6*	60.5*	59.9*	71.1	79.7	73.0
Q1 2001 Q2-Q4 2011	68.5*	70.4	69.3*	51.7*	84.2	66.3	63.8	89.5	74.5
Stable Q2-Q4	83.6*	84.1*	84.0*	65.6*	83.0*	78.9*	87.0	132.5*	118.4*
Q5 2001 Q1-Q4 2011	97.1	106.5*	100.5	99.1	148.0*	113.9	140.5*	153.6*	144.1*
Q1-Q4 2001 Q5 2011	113.6*	92.2*	103.4*	89.4	111.2	104.0	132.2	169.5	150.1*
Stable Q5	131.0*	114.4*	118.0*	118.8	120.9*	120.5*	162.6*	168.8*	167.0*

Source: ONS Longitudinal Study

OVERALL INFLUENCE?





RII	Health-deprivation gradient		Health-social class gradient	
	Transitions	No Transitions	Transitions	No Transitions
Total Population	2.23	2.10	2.48	1.80
Indian	2.54	2.37	3.84	1.68
Pakistani & Bangladeshi	1.73	1.63	2.17	1.41

Source: ONS Longitudinal Study

CONCLUSIONS

- Opportunities for, and nature of migration events, vary between ethnic groups
- Younger migrants more likely to be in better health than older migrants
- Transitions into and out of Q1 and Q5 by **movers** contributes to widening health gradients between 1991-2001 and 2001-2011
- Movers churning within Q1 in **better** health than stayers who remain in Q1; movers churning within Q5 have **poorer** health than stayers who remain in Q5
- Moves between the middle classes / deprivation quintile as important as moves at the extreme

The permission of the Office for National Statistics to use the Longitudinal Study is gratefully acknowledged, as is the help provided by staff of the Centre for Longitudinal Study Information & User Support (CeLSIUS). CeLSIUS is supported by the ESRC Census of Population Programme (Award Ref: ES/K000365/1). The authors alone are responsible for the interpretation of the data.

THANK YOU!

@F_Darlington