

Project 67

Health, Housing Tenure & Entrapment 2001-2011

Does Changing Tenure and Address Improve Health?



Myles Gould (UoL) Email: m.i.gould@leeds.ac.uk Twitter: @Myles_Gould_UoL

Ian Shuttleworth (QUB) Email: i.shuttleworth@qub.ac.uk

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Learning from the 2011 Census 4: Ethnicity, Health and Migration

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Introduction

- Political & policy debates about social-rented housing focus on low spatial mobility & reduced chances of upward social mobility
- Extensive literature on inter-relationships between: housing tenure, health, and wider dimensions of social wellbeing, and the measurement of these at both the individual and area level (e.g. Marmot, 2010; Macintyre et al, 2002)
- Smith & Easterlow (2005) consider concepts of housing entrapment & selective placement
 - *Are people entrapped in poor housing & health?*
 - *Are people selectively placed in tenures / spatialities in poor health?*

Project Aims

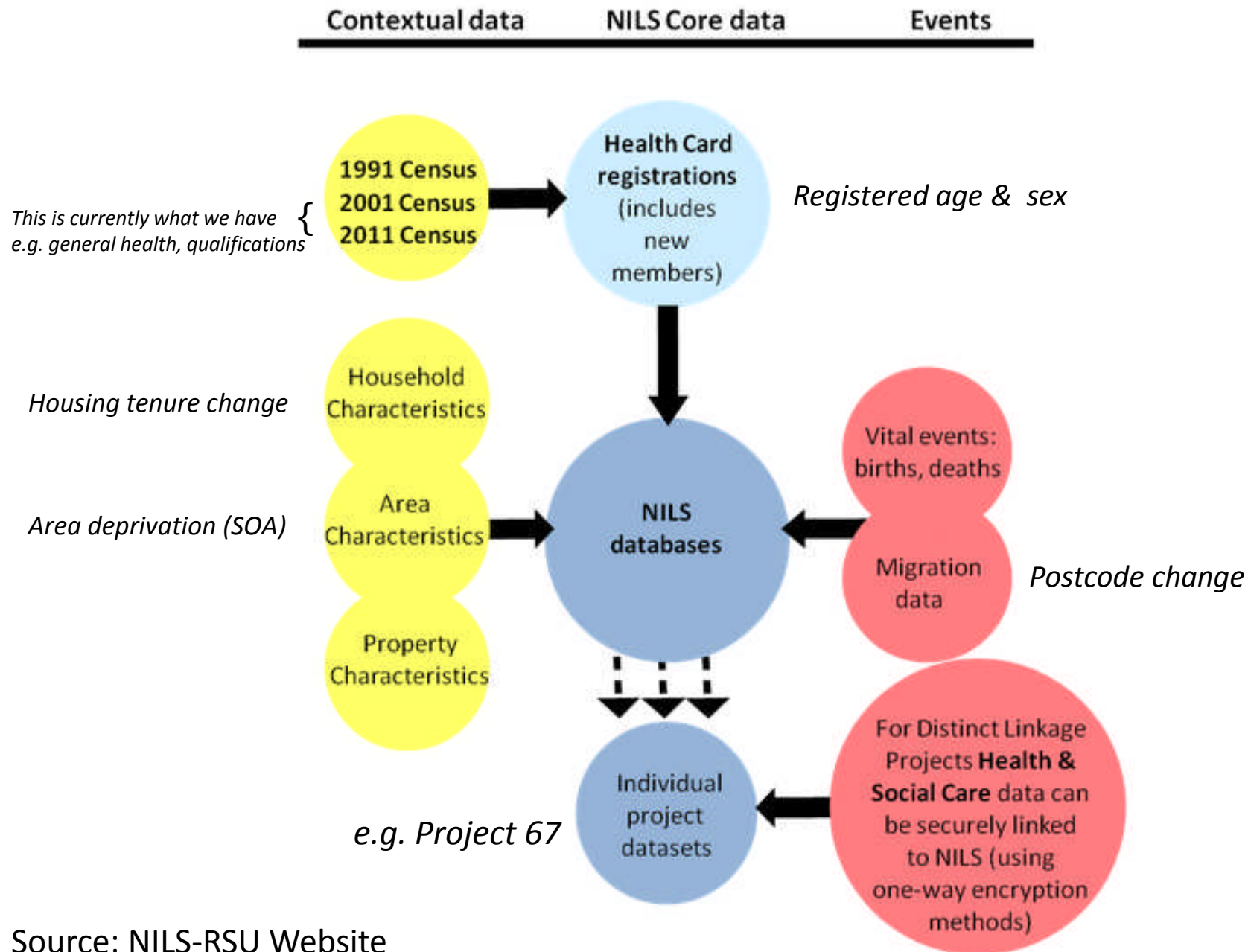
1. To explore relationships between *changing* health & *housing tenure* in Northern Ireland, 2001-2011
2. To determine whether different *tenure trajectories* are associated with changes in health status e.g. movements from social rented to owner occupied housing & changing health status
3. To explore whether changing health status is linked to different kinds of spatial move/mobility
 - moves between different types of place/area (e.g. area deprivation score)
 - i.e. change SOA geographical area (although not considered today)

Aims 1 & 2 are this presentation's principle focus

Data and Analytical Approach

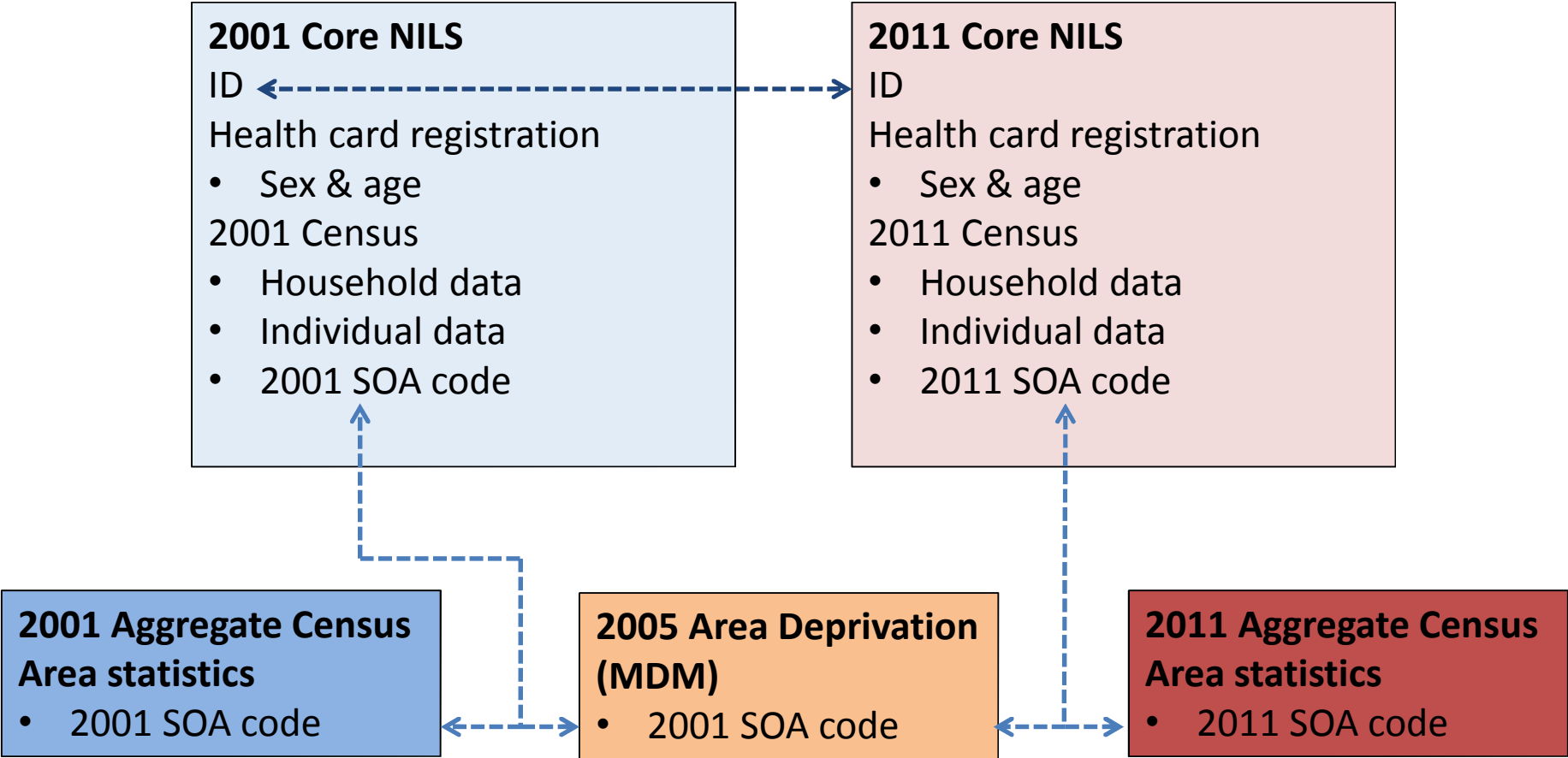
- Restricted set of variables for parsimony
- Descriptive analysis different kinds of tenure/health transition in the NLS
 - changes in individuals' general health 2001-2011
 - changes tenure type
- Multilevel statistical modelling (individuals nested in SOAs)
- Later will look at limiting long-term illness (disability)
 - will also compare health changes with chronic illness(es) status in 2011

NILS Structure



Source: NILS-RSU Website

NILS Structure



Population Bases

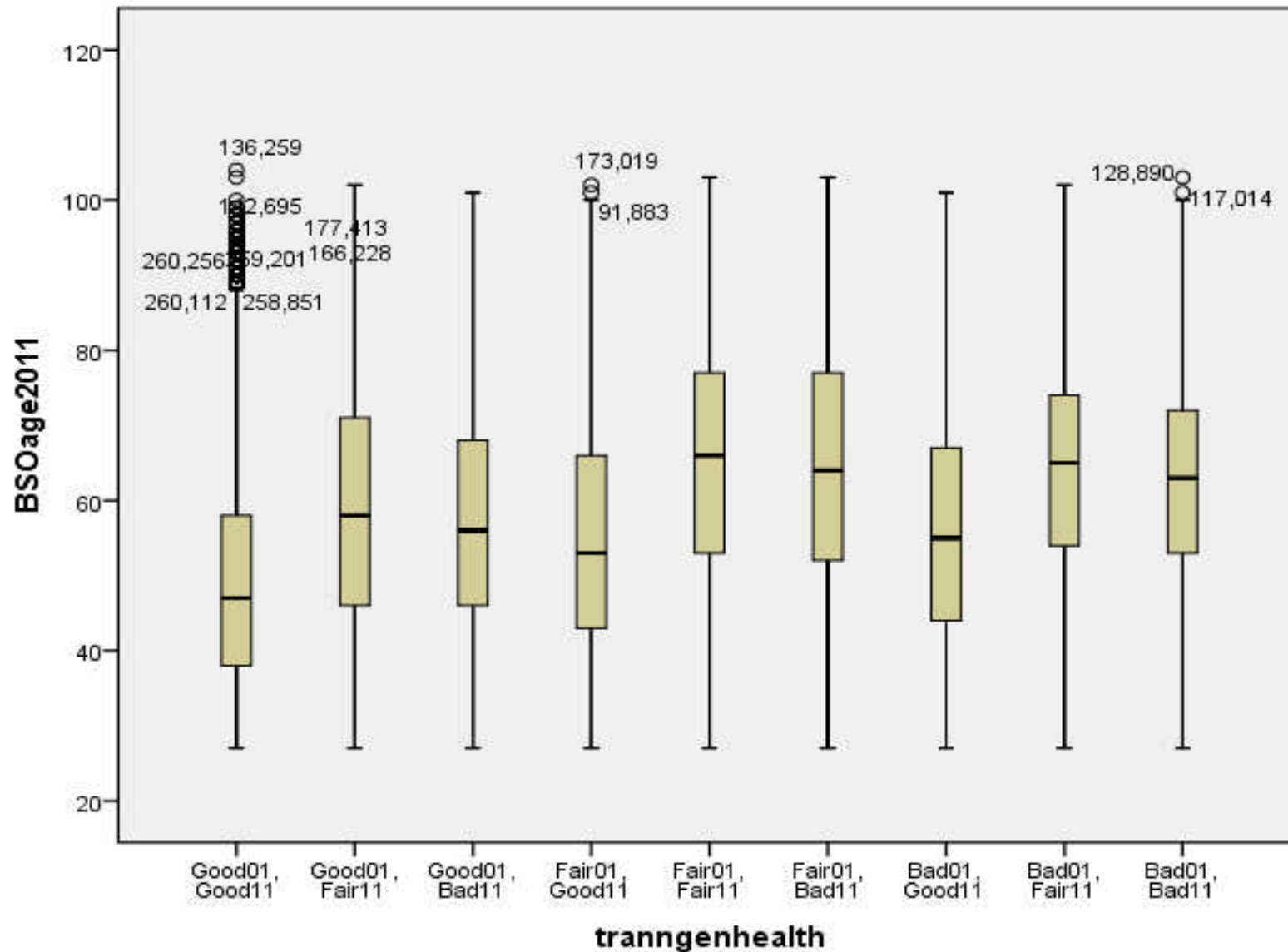
- **Movers – changed tenure**
 - may/may not changed home/address
 - &/or changed SOA
 - theoretically possible to only change tenure - e.g. (re)mortgage, buy from landlord
- **Movers changed address / SOAs**
 - Recently been analysing this too: 4 possibilities
 1. Changed tenure, changed address
 2. Changed tenure, not changed address (unlikely)
 3. Not changed tenure, changed address
 4. Not changed tenure, not changed address

Health Transitions: 2001-2011

		Health 2011			
		Good health	Fairly good health	Not good health	Total
Health 2001	Good health	143503	23012	5458	171973
		83.4%	13.4%	3.2%	100.0%
	Fairly good health	29323	23659	6528	59510
		49.3%	39.8%	11.0%	100.0%
	Not good health	6131	12632	11187	29950
		20.5%	42.2%	37.4%	100.0%
	Total	178957	59303	23173	261433
		68.5%	22.7%	8.9%	100.0%

- Health 2011: 5 categories recoded /combined to 3 to compare with 2001

Health Transitions (2001-2011) & Age (2011)



- Reminds us of obvious importance of taking account of age, doing this in our statistical modelling work

Health & Tenure Transitions

	Good health 2001 and 2011	Good health 2001 and fair 2011	Good health 2001 and bad 2011	Fair health 2001 and good 2011	Fair health in 2001 and 2011	Fair health 2001 and bad 2011	Not good health 2001 and good 2011	Not good 2011 and fair 2011	Not good 2001 and not good 2011	Total
Remains Own Occup	113919	15224	2870	20803	14667	3202	3714	6912	5100	186411
Own Occup > Soc Rent	8117	1891	635	1682	1452	549	387	825	768	16306
Own Occup > Priv Rent	898	274	80	217	391	98	41	134	126	2259
Soc Rent > Own Occup	5289	884	273	1510	990	354	479	637	709	11125
Remains Soc Rent	6823	2718	940	2744	3608	1397	807	2543	3149	24729
Soc Rent > Priv Rent	286	198	88	168	368	136	71	267	298	1880
Priv Rent > Own Occup	4361	447	92	824	381	108	185	194	143	6735
Priv Rent > Soc Rent	2643	704	224	873	798	292	247	549	515	6845
Remains Priv Rent	492	88	18	109	132	36	25	63	40	1003
Total	142828	22428	5220	28930	22787	6172	5956	12124	10848	257293

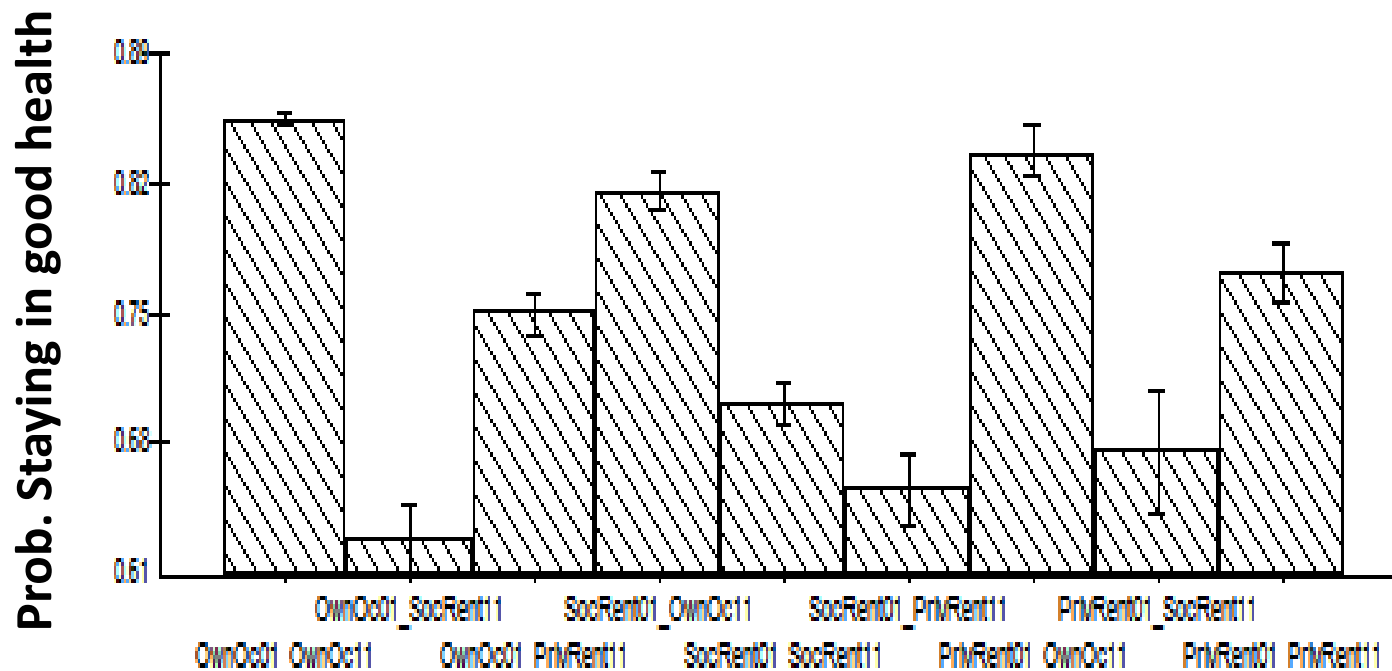
Modelling Approach

- Restricted set of variables for parsimony
- Multilevel statistical modelling (individuals nested in SOAs)
 - Place difference having taken account socio-demographic characteristics [bit today]
 - Cross-level interactions: individual/household & area effects
- At this stage a number of logistical regression models treating response as binary outcomes
 1. Sticking: E.G. Bad to Bad (2001-11); ***Good to Good (2001-11) (staying good)***
 2. Changing: EG Good to Fair/Poor (2001-11); ***Bad to Fair/Good (2001-11)***
 - *Nine possible suites/sets*
 - *Either as proportion of all (261k) or a 2001 health status subset (Good, Fair or Bad)*

Health & Tenure Transitions (Model predictions)

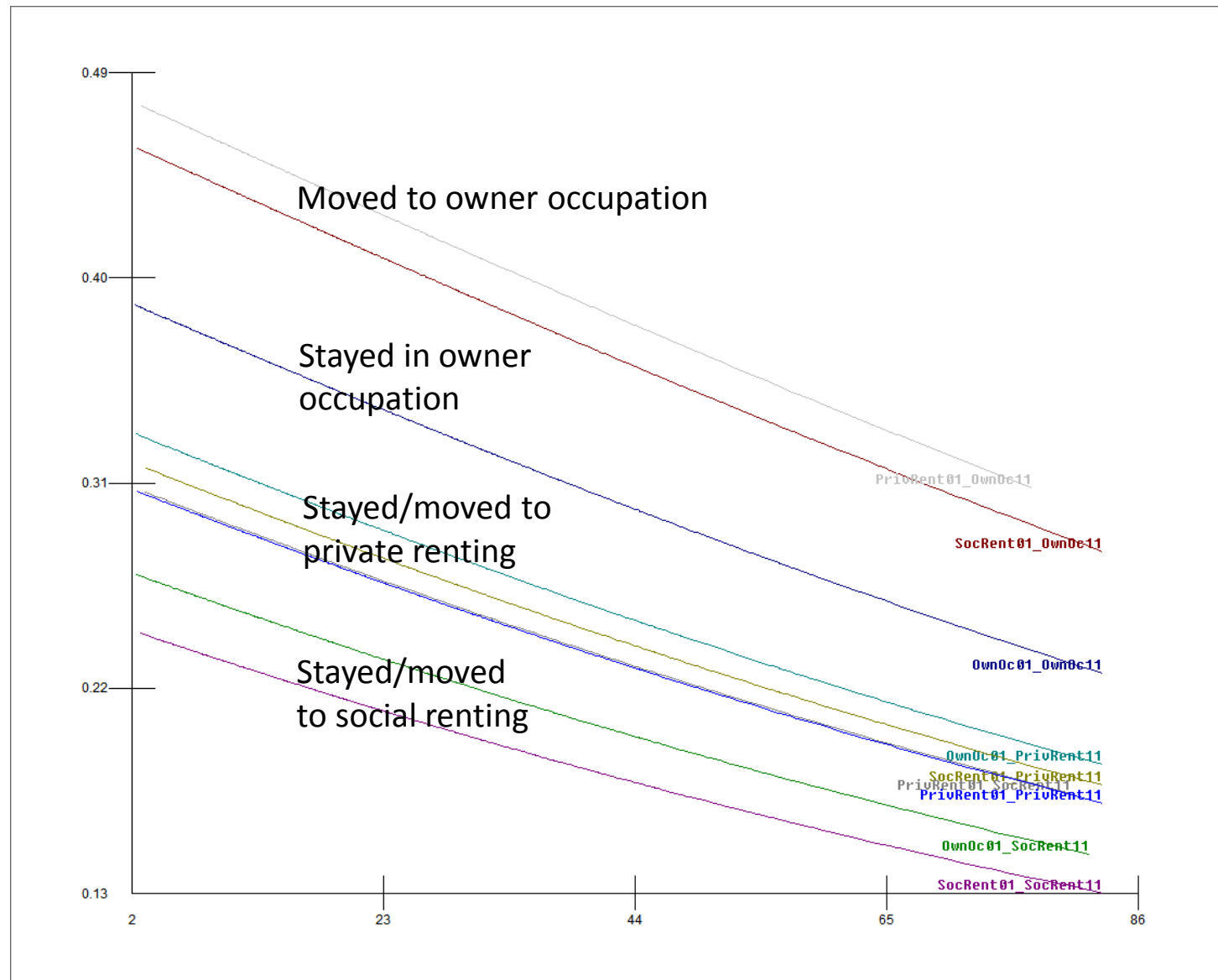
Example Model

- Response : probability of transition from good health 2001 to good health 2011
- Having allowed for tenure change
- Also age, sex, education level, community background
- Plus allowed for rates to vary by SOA (small effect, but significant place differences)



Cross-level interactions

Prob. Transitioning from bad to fair/good health



Interaction of tenure transition & multiple deprivation (md=17.8)

Cross-level interactions



Interaction of change of address & multiple deprivation (md=17.8)

Summary Results

- Age decreases the probability of transiting from bad to good health, and of remaining in good health in 2001 and 2011
- Moves out of owner occupation are associated with transitions to poor self-reported health
- Remaining in social renting in 2001 and 2011 is associated with poorer self-reported general health in 2001 and 2011

Conclusions (1)

- Other model results reassuring
 - finding similar/consistent patterns with different specifications of Y-variable
 - Results are consistent, logical & plausible
- Seeking to model considerable complexity: transitional states, compositional & contextual effects, & cross-level interactions
 - Possible because of large & rich variable detail of NLS
- We think self-reported general health is a *good* Census question *that captures people's well-being / happiness*
 - but will do more investigation/work

Conclusions (2)

- Evidence of selective placement of the (un)healthy in different tenures / spatailities
- Implications: tenure and spatial mobility (or its lack) linked to social residualisation
- Can't assign causality/directionality between health/tenure, or tenure/health
- Requires quite different research designs (c.f. Smith & Easterlow, 2005)

Future Work

- Also doing another presentation next month (BSPS)
 - will show some analysis that has looked at relative importance & interaction of postcode address change & change of tenure 2001-11
- Specifically looking at those alone, who moved:
 - Good to bad health (2001-11)
 - Bad to good health (2001-11)
 - But undertaken validation of relationships for all 9 health transitions (G>G, G>F, G>B; F>G, F>F, F>B; & B>G, B>F, B>B)

Future plans

- Will look at limiting long-term illness (LLTI) transitions
- Unified *multinomial* models of the different health transitions simultaneously
- Will compare general health / LLTI with NI 2011 chronic illness question

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NILS-RSU Contact Details

Web: <http://www.qub.ac.uk/research-centres/NILSResearchSupportUnit/>

Email: nils-rsu@qub.ac.uk