



# CeLSIUS

CENTRE FOR LONGITUDINAL STUDY  
INFORMATION & USER SUPPORT

# Introduction to the UK LS & Census 2011 Data Linkage

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Office for  
National Statistics



# What do the UK LSs comprise of ?

The ONS Longitudinal Study covers England and Wales:  
approximately 1% sample: 1971 onwards

- <http://www.ucl.ac.uk/celsius>

The Scottish Longitudinal Study covers Scotland: 5.3% sample:  
1991 onwards

- <http://www.lscs.ac.uk/sls>

The Northern Ireland Longitudinal Study covers Northern  
Ireland: 28% sample: 2001 onwards (1991 due Autumn 2014)

- [http://www.qub.ac.uk/research-centres/  
NILSResearchSupportUnit/](http://www.qub.ac.uk/research-centres/NILSResearchSupportUnit/)

also the Northern Ireland Mortality Study: 100% sample,  
links deaths since 2001 to Census data 1991-2011

# Cross organisation collaboration

- The UK LSs are an excellent example of collaboration between national statistical offices and ESRC and academia
- ESRC has taken very important initiatives in funding the development, with the official statistics agencies, of the UK Longitudinal Studies which are one of the gold standard data sets that enable researchers to link prior statuses and transitions to subsequent events
- Grateful to the commitment of statistical offices to continue updating and developing LSs in partnership with ESRC and the user support facilities

# Data included

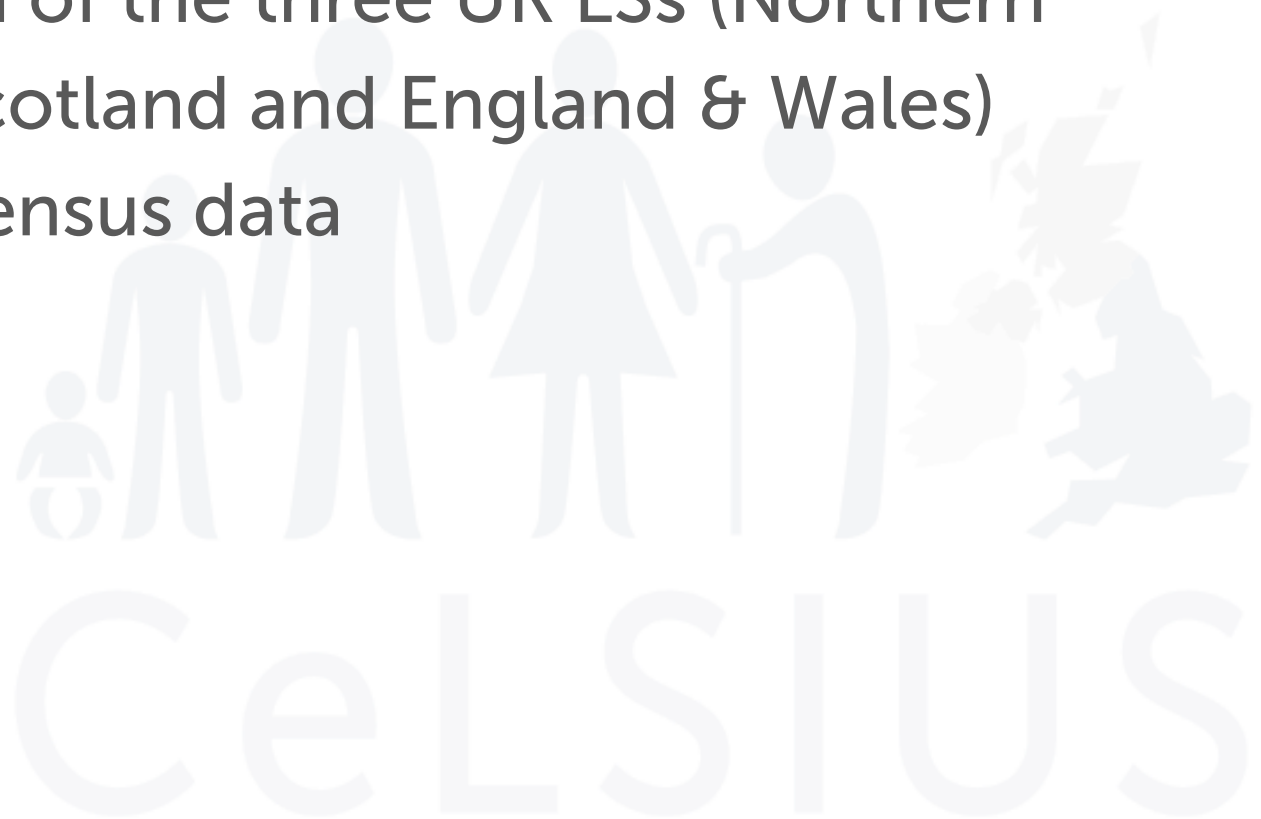
- Census data from 1971 (EW), 1991 (Scot. and NI) onward
- Census data for the whole household, not just sample member
- Vital registration data ("events"), including:
  - Birth of sample member
  - Birth of children to sample member
  - Widow(er)hood of sample member
- Cancer and death registration
- Scotland and N.I. have additional components

# Sampling

- Initial sample drawn from 1971 Census (EW), 1991 Census (Scot.), Health Card registration system (NI)
- Selected by birthday, irrespective of year of birth
- Number of birthdays: 4 (EW), 20 (Scot.), 104 (NI)
- Maintained through addition of immigrations and new births with one of the sampling birthdays
- Losses to sample through deaths and out-migrations (though all records are retained in the database)

# 2011 UK LS data linkage

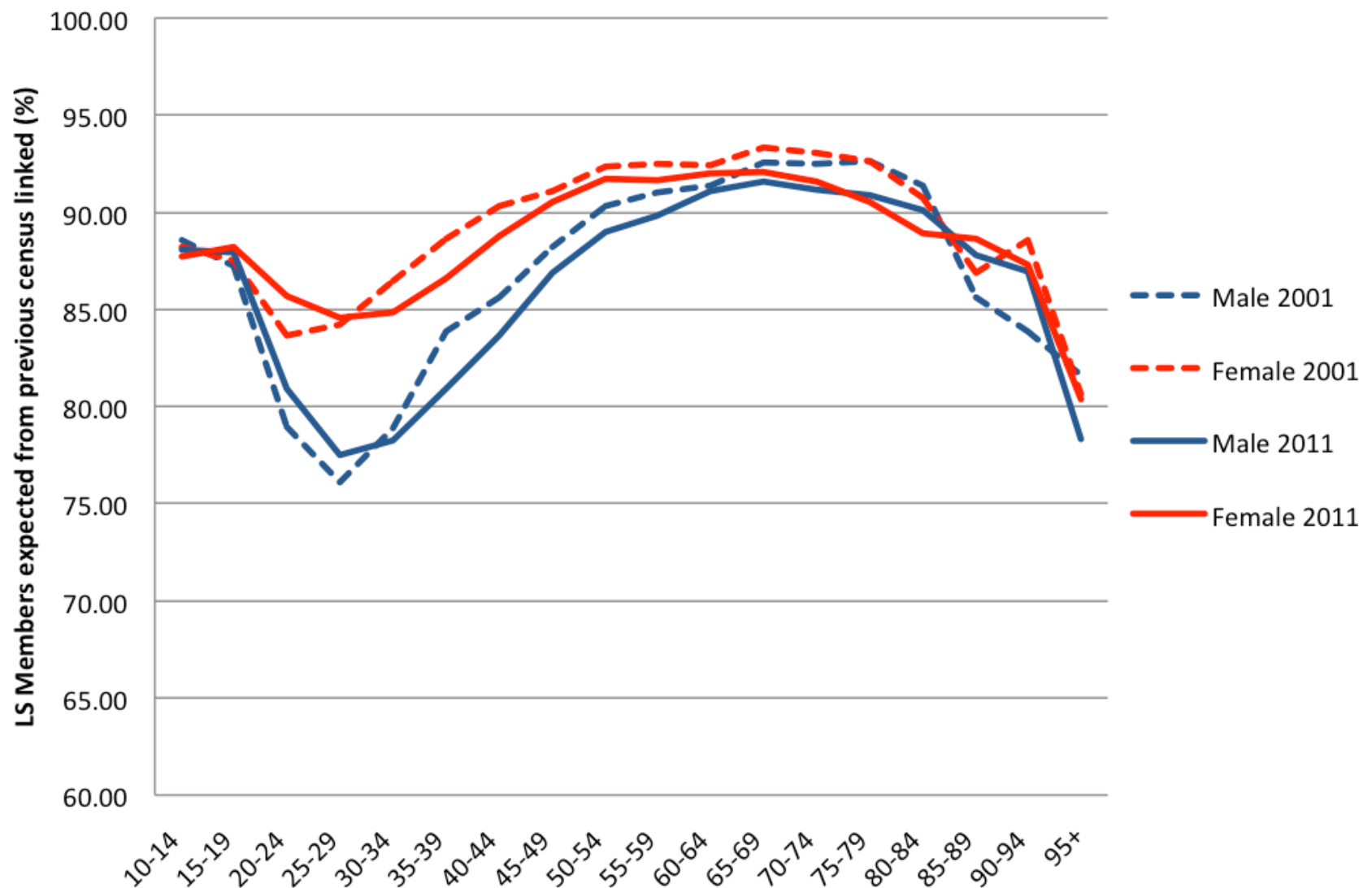
- Links each of the three UK LSs (Northern Ireland, Scotland and England & Wales) to 2011 Census data



# NILS 2011 linkage

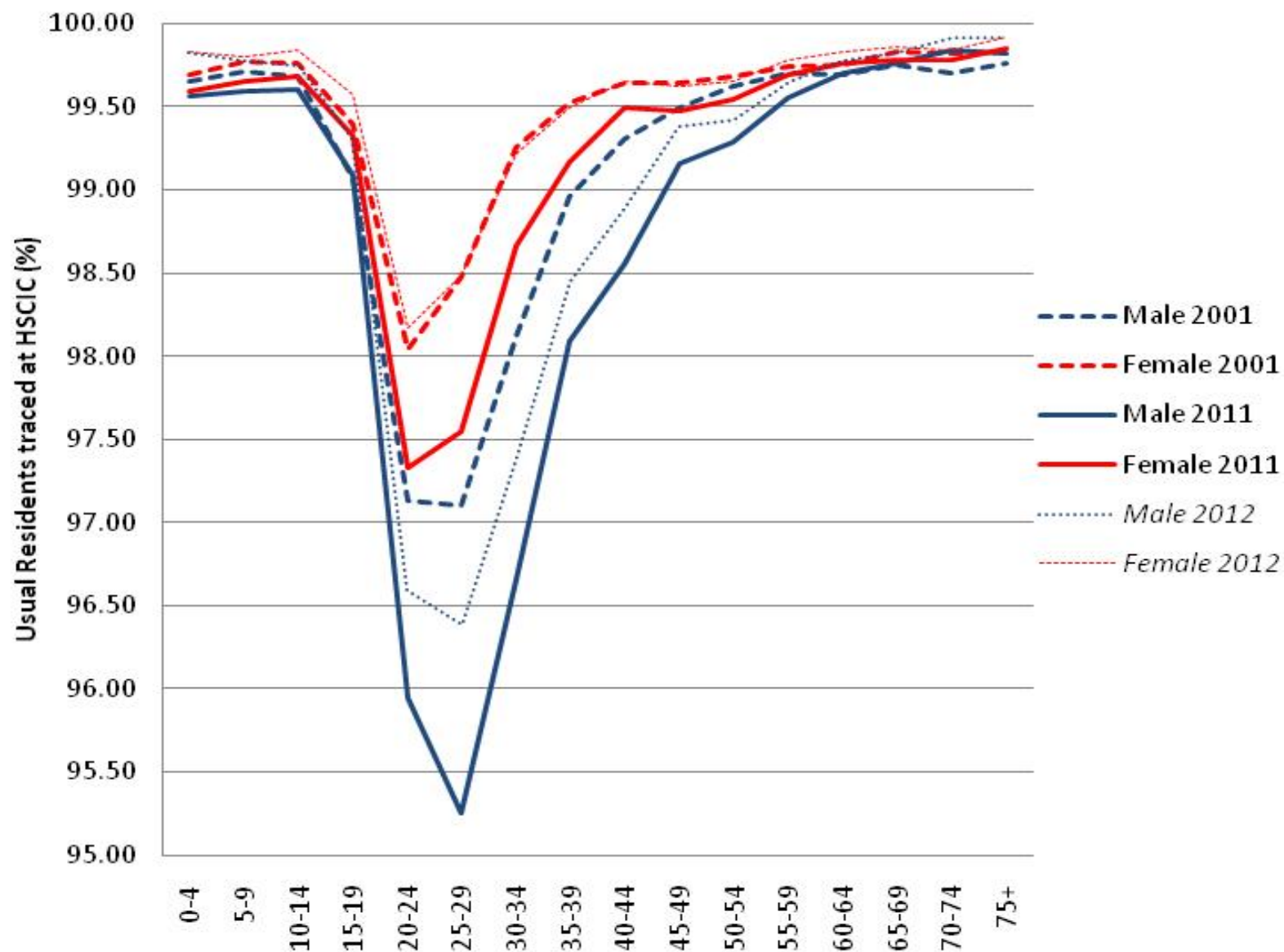
- NILS sample based on Health Registration whilst SLS and ONS LS samples based on Census
- High linkage rates, 95%+
- 2011 rates consistent with 2001 rates
- Forward and Backward rates consistent with ONS LS and SLS

## ONS LS Linkage Rates 2001 & 2011

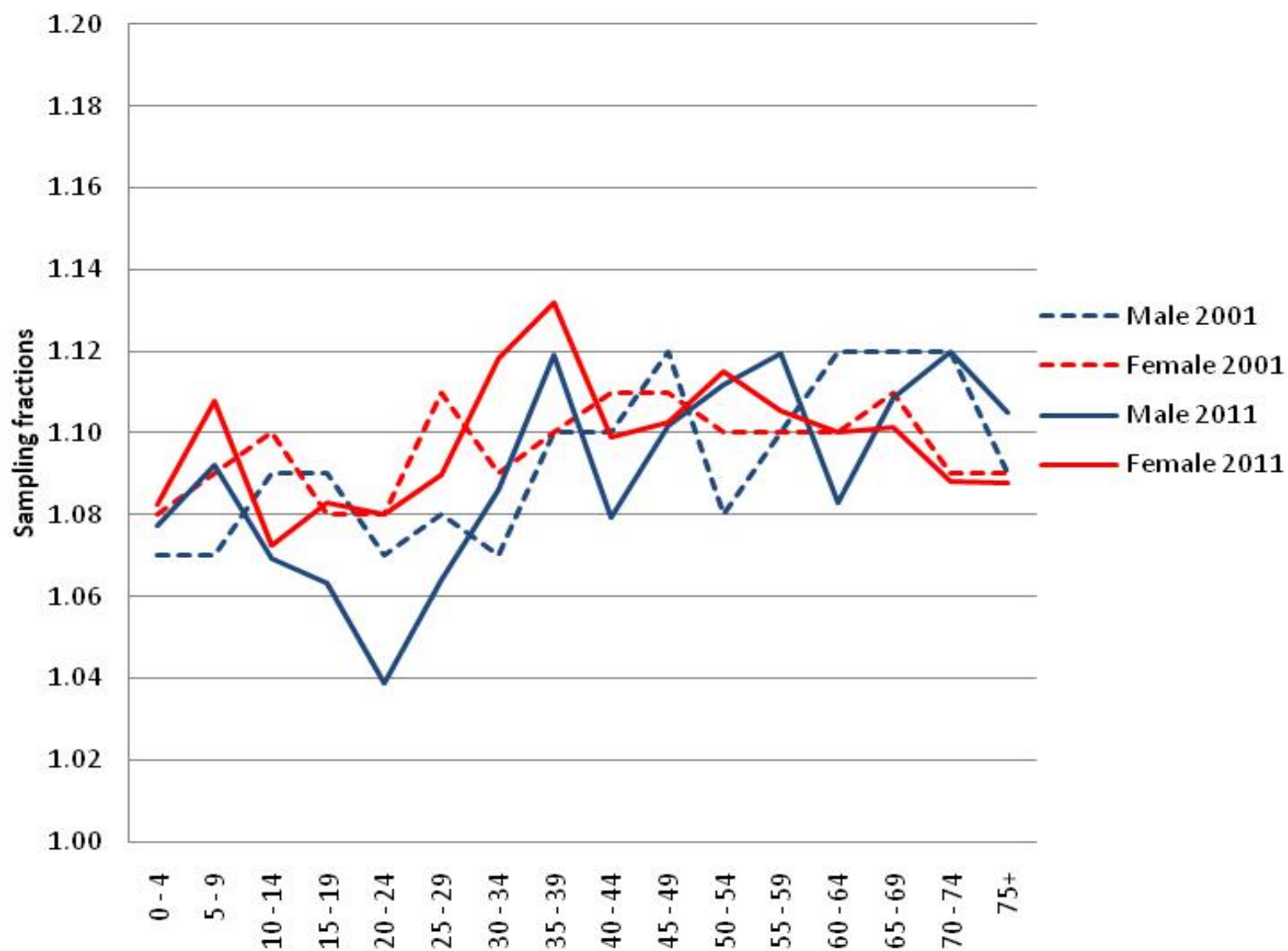




## ONS LS Tracing Rates 2001 & 2011



## ONS LS Sampling Fractions 2001 & 2011





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## New questions in the 2011 Censuses



Office for  
National Statistics



# Status of visitors

E/W  
Scot.  
NI

**H4** Apart from everyone counted in question H2, who else is staying overnight here on 27 March 2011? These people are counted as visitors. Remember to include children and babies.

➡ Tick all that apply

- ☐ People who usually live somewhere else in the UK, for example, boy/girlfriends, friends, relatives
- ☐ People staying here because it is their second address, for example, for work. Their permanent or family home is elsewhere
- ☐ People who usually live outside the UK who are staying in the UK for less than 3 months
- ☐ People here on holiday

**OR** ☐ There are no visitors staying overnight here on 27 March 2011 ➡ Go to **H6**

# Housing adaptations

NI

**H10** Has this accommodation been designed or adapted for:

➡ Tick all that apply.

- ☐ wheelchair usage?
- ☐ other physical or mobility difficulties?
- ☐ visual difficulties?
- ☐ hearing difficulties?
- ☐ other, write in

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☐ none of the above

# Type of central heating

E/W  
Scot.  
NI

**H11**

What type of central heating does this accommodation have?

- ➡ Tick all that apply, whether or not you use it
- ➡ Central heating is a central system that generates heat for multiple rooms
- ☐ No central heating
- ☐ Gas
- ☐ Electric (including storage heaters)
- ☐ Oil
- ☐ Solid fuel (for example wood, coal)
- ☐ Other central heating

E/W

## Second address

**5** Do you stay at another address for more than 30 days a year?

- ☐ No → Go to **7**
- ☐ Yes, write in other UK address below




Postcode



**OR** ☐ Yes, outside the UK, write in country

**6** What is that address?

- ☐ Armed forces base address
- ☐ Another address when working away from home
- ☐ Student's home address
- ☐ Student's term time address
- ☐ Another parent or guardian's address
- ☐ Holiday home
- ☐ Other

# Date of Arrival and intention to stay

E/W  
Scot.

**10** If you were not born in the United Kingdom, when did you most recently arrive to live here?



Do not count short visits away from the UK

Month

Year

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**11** If you arrived before 27 March 2010 ➔ Go to **13**

If you arrived on or after 27 March 2010 ➔ Go to **12**

**12** Including the time you have already spent here, how long do you intend to stay in the United Kingdom?

☐

Less than 6 months

☐

6 months or more but less than 12 months

☐

12 months or more

E/W



# Date of Arrival and intention to stay: NI

**8** If you arrived to live in the United Kingdom:

- on or after 27 March 2010 → Go to **9**
- before 27 March 2010 → Go to **10**

**9** Including the time you have already spent in the United Kingdom, how long do you intend to stay in the UK?

- ☐ Less than 6 months
- ☐ 6 months or more but less than 12 months
- ☐ 12 months or more

**10** Have you lived outside Northern Ireland for a continuous period of one year or more?

- ☐ Yes
- ☐ No → Go to **13**

**11** During this time outside Northern Ireland, what was the last country you lived in?

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**12** When did you most recently arrive to live in Northern Ireland?

Month	Year						
<table border="1"><tr><td></td><td></td></tr></table>			<table border="1"><tr><td></td><td></td><td></td><td></td></tr></table>				

# Main language

E/W

NI

**18** What is your main language?

☐ English ➔ Go to **20**

☐ Other, write in (including British Sign Language)

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**19** How well can you speak English?

Very well

Well

Not well

Not at all

☐
☐
☐
☐

# Main language (Scotland)

Scot.

**16** Which of these can you do?

◆ Tick all that apply.

	English	Scottish Gaelic	Scots
Understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

or

☐ None of these

**17** How well can you speak English?

Very well      Well      Not well      Not at all

☐
☐
☐
☐

**18** Do you use a language other than English at home?

◆ Tick all that apply.

☐ No, English only

☐ Yes, British Sign Language

☐ Yes, other - please write in

# Ethnic identity and passport(s) held

E/W  
Scot.  
NI

E/W  
NI

**15** How would you describe your national identity?

➔ Tick all that apply

- ☐ English
- ☐ Welsh
- ☐ Scottish
- ☐ Northern Irish
- ☐ British
- ☐ Other, write in

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**22** What passports do you hold?

➔ Tick all that apply

- ☐ United Kingdom
- ☐ Irish
- ☐ Other, write in

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

☐ None

# Disability

Scot.

**20** Do you have any of the following conditions which have lasted, or are expected to last, at least 12 months?

◆ Tick all that apply.

- ☐ Deafness or partial hearing loss
- ☐ Blindness or partial sight loss
- ☐ Learning disability (for example, Down's Syndrome)
- ☐ Learning difficulty (for example, dyslexia)
- ☐ Developmental disorder (for example, Autistic Spectrum Disorder or Asperger's Syndrome)
- ☐ Physical disability
- ☐ Mental health condition
- ☐ Long-term illness, disease or condition
- ☐ Other condition, please write in


or

- ☐ No condition

N.I.

**23** Do you have any of the following conditions which have lasted, or are expected to last, at least 12 months?

➡ Tick all that apply.

- ☐ Deafness or partial hearing loss
- ☐ Blindness or partial sight loss
- ☐ Communication difficulty (a difficulty with speaking or making yourself understood)
- ☐ A mobility or dexterity difficulty (a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, lifting or carrying)
- ☐ A learning difficulty, an intellectual difficulty, or a social or behavioural difficulty
- ☐ An emotional, psychological or mental health condition (such as depression or schizophrenia)
- ☐ Long-term pain or discomfort
- ☐ Shortness of breath or difficulty breathing (such as asthma)
- ☐ Frequent periods of confusion or memory loss
- ☐ A chronic illness (such as cancer, HIV, diabetes, heart disease or epilepsy)
- ☐ Other condition
- ☐ No condition

# Cross UK Census collaboration

All three user support units and statistical offices are working together with ESRC to make UK research possible

Three examples of this

- Calls-Hub – one stop shop for an introduction to the three LSs
- Edata shield -a technical resource for modelling with comparable data from all three LSs
- SYLLS - techniques to produce synthetic data akin to the real data preserving the relationships between variables and transitions of individuals over time



## CALLS-HUB

Census & Administrative data  
Longitudinal Studies Hub

[Home](#) [About](#) [Support Units](#) [Outputs](#) [Guides & Resources](#) [News](#) [Events](#) [Blog](#) [Variables](#) [More](#)

# Using more than one LS for your research

Due to Data Protection concerns, the current agreements in place for the LSs mean that it is not possible to access LS data outwith its respective safe-setting. This means that to-date it has not been possible to fully combine datasets to allow comparisons between regions or to create a UK-wide sample. Instead the only option has been to conduct separate analyses and then compare or combine the results on an ad-hoc basis.

Work in the SLS-DSU by Prof Gillian Raab has resulted in a new methodology which means it is now possible to analyse data from one or more LS *as though they were part of the same dataset*. This is achieved through a process called eDatashield, which is currently able to support all forms of GLM regression analyses.

If you are interested in finding out more about eDatashield or would like to discuss using more than one LS for your study, please [contact us](#).

### QUICK DATA DICTIONARY SEARCH

Keyword

SEARCH

### RECENT NEWS

[New email addresses – LSCS and SLS-DSU](#)

[Speakers announced for UK LS 2011 Census Linkage Launch](#)

### UPCOMING EVENTS

[UK LS Census Linkage Launch Event – registration now open](#)

March 6, 2014 at Harvey Goodwin Suite,  
Church House, Westminster, SW1P 3NZ

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### Guides & Resources

[Using more than one LS for your research](#)

[Census forms](#)

[Synthetic LS data](#)

[Useful documents](#)

[Applying to use the LSs](#)

[FAQs](#)



## SLS-DSU

Scottish Longitudinal Study  
Development & Support Unit

Home About Projects Guides & Resources Outputs News Events Variables More

Welcome to

Explore the variables held in the SLS data dictionary.

Updated variable search interface coming soon featuring an improved interface and the option to build and store an online list of variables which can be downloaded to use in your application form.

website of the Scottish Longitudinal Study Development and Support

RECENT NEWS

New email addresses – LSCS and SLS-DSU



## NILS-RSU

Northern Ireland Longitudinal Study  
Research Support Unit

Home About Projects Guides & Resources Outputs News Events Variables More

Welcome to

Explore the variables held in the NILS data dictionary.

### LATEST TWEETS

 ADLS @ADLSweet 18 Feb  
Due to high demand extra tickets now available for the UK Longitudinal Studies Linkage Launch. Further info at [calls.ac.uk/event-entryuk...](https://calls.ac.uk/event-entryuk...)

Retweeted by CALLS

Expand

Please see the Northern Ireland Longitudinal Study Research Support Unit

Retweeted by CALLS

Expand

Welcome to the new website of the Northern Ireland Longitudinal Study Research Support Unit (NILS-RSU)

Here you can find out more about the work of the NILS-RSU, including:



## CALLS-HUB

Census & Administrative data  
Longitudinal Studies Hub

### LATEST TWEETS

 NINIS @NINISNINIS 7h  
Median Sale Price of Residential Properties interactive map with the latest figures out today [bit.ly/1h5d2mW](https://bit.ly/1h5d2mW) [pic.twitter.com/1h5d2mW](https://pic.twitter.com/1h5d2mW)

Retweeted by CALLS

Show Photo

 ADLS @ADLSweet 18 Feb

Due to high demand extra tickets now available for the UK Longitudinal Studies Linkage Launch. Further info at [calls.ac.uk/event-entryuk...](https://calls.ac.uk/event-entryuk...)

Retweeted by CALLS



# CeLSIUS

Centre for Longitudinal Study Information & User Support

Home About Support Units Outputs Guides & Resources News Events Blog Variables More

CALLS - HUB comprises of three Longitudinal Study units:

QUICK DATA DICTIONARY SEARCH

Keyword

SEARCH

Run a refined search to build a list of variables for use in your project application form.

Welcome to the website for the Census & Administrative data Longitudinal Studies Hub (CALLS-Hub).

Here you can find out more information about the three UK census-based longitudinal studies (LSs) and their support units CeLSIUS, SLS-DSU, NILS-RSU

- What data do the LSs hold?
- How to apply to use LS data in your research
- Using more than one LS dataset for your analysis

Outputs

User Guides

### RECENT NEWS

New email addresses – LSCS and SLS-DSU

Contact details for the Longitudinal Studies Centre Scotland (LSCS) and Scottish Longitudinal Study Development Support Unit (SLS-DSU) have now changed! In addition... [Read more...](#)

Speakers announced for UK LS 2011 Census Linkage Launch

Announcing the list of speakers for the Census 2011 launch event to be held on Thursday 6th March 2014 at... [Read more...](#)



# CeLSIUS

CENTRE FOR LONGITUDINAL STUDY  
INFORMATION & USER SUPPORT

Longitudinal Study Information and User Support. We are an ESRC-funded support team for users of the Office for National Statistics (ONS) Longitudinal Study (LS).

Most of the CeLSIUS team moved to University College London (UCL). The team at UCL

provide user support for the ONS LS in a timely fashion. This service is free to the user.

The LS and the new dataset is now available to researchers.

Available for download in zipped form; you will need Microsoft Access software to use it.

(.mdb unzipped, Access format)

Data in an active LS project:

Request Form but the content can be very similar to your previous application – just add