



# Healthy Ageing in Scotland

## Sample Design & Health-Related Response Bias Using Administrative Data

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# HAGIS - Healthy AGing In Scotland

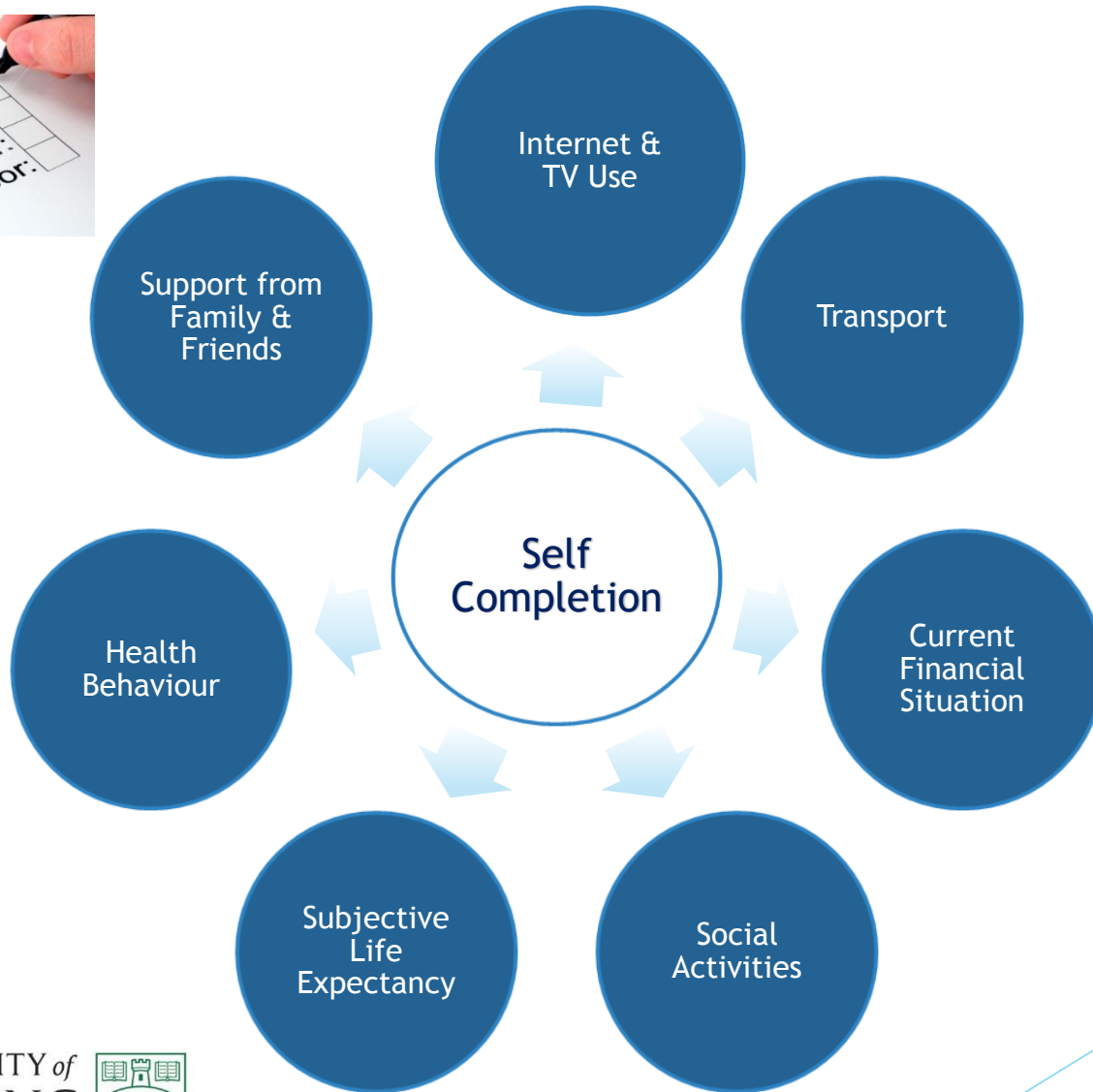


- ▶ Part of the HRS family of longitudinal studies of ageing
- ▶ Pilot Study funded by NIA and Nuffield Foundation
- ▶ Sample size ~ 1000
- ▶ Key innovations
  - ▶ Sampling methodology
  - ▶ Cognitive ageing
  - ▶ Financial literacy

# Main questionnaire - closely related to ELSA/NICOLA



# Self-Completion

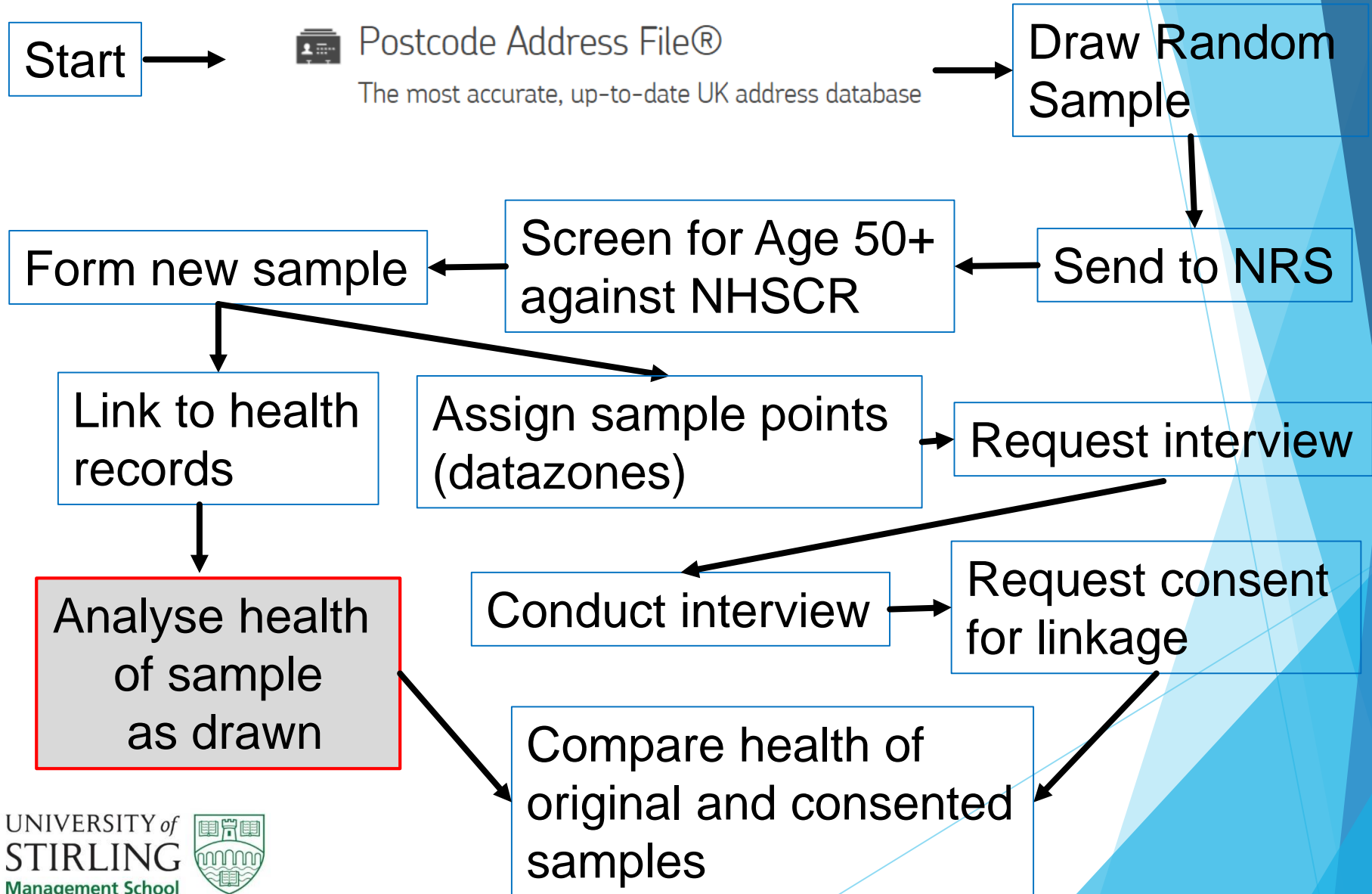


# Sampling Strategy

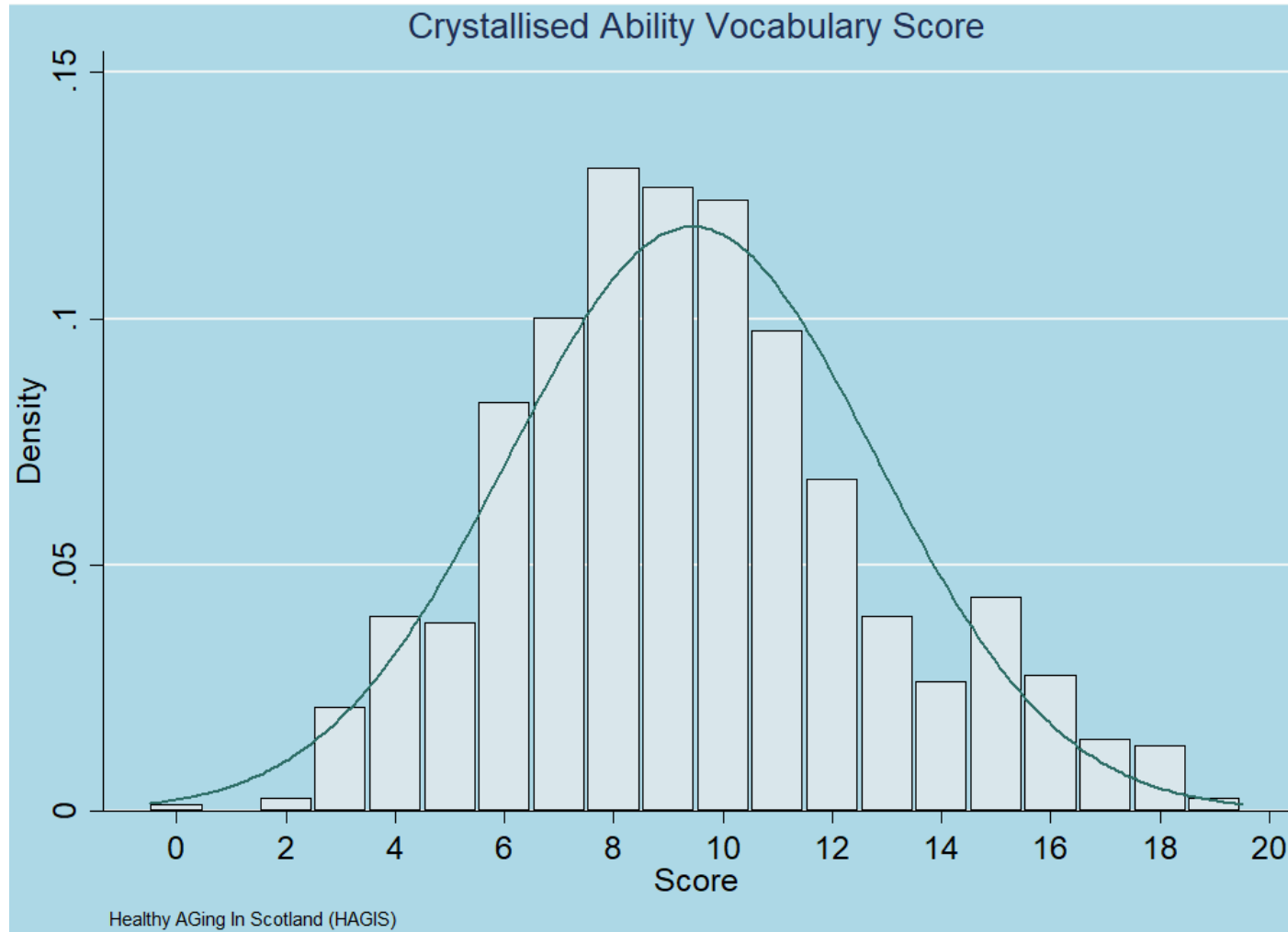


- ▶ Aim - to recruit 1,000 people aged 50 and over from mainland Scotland
- ▶ 2-stage cluster sampling approach
  - ▶ Random sample of residential addresses from Postcode Address File (PAF)
  - ▶ Scotland stratified to include 193 mainland Scotland datazones across 11 Scottish Health Boards
  - ▶ Within each datazone addresses ordered by postcode and systematic selection of addresses performed
- ▶ Selected addresses sent to National Records of Scotland to screen household for resident eligibility to the study

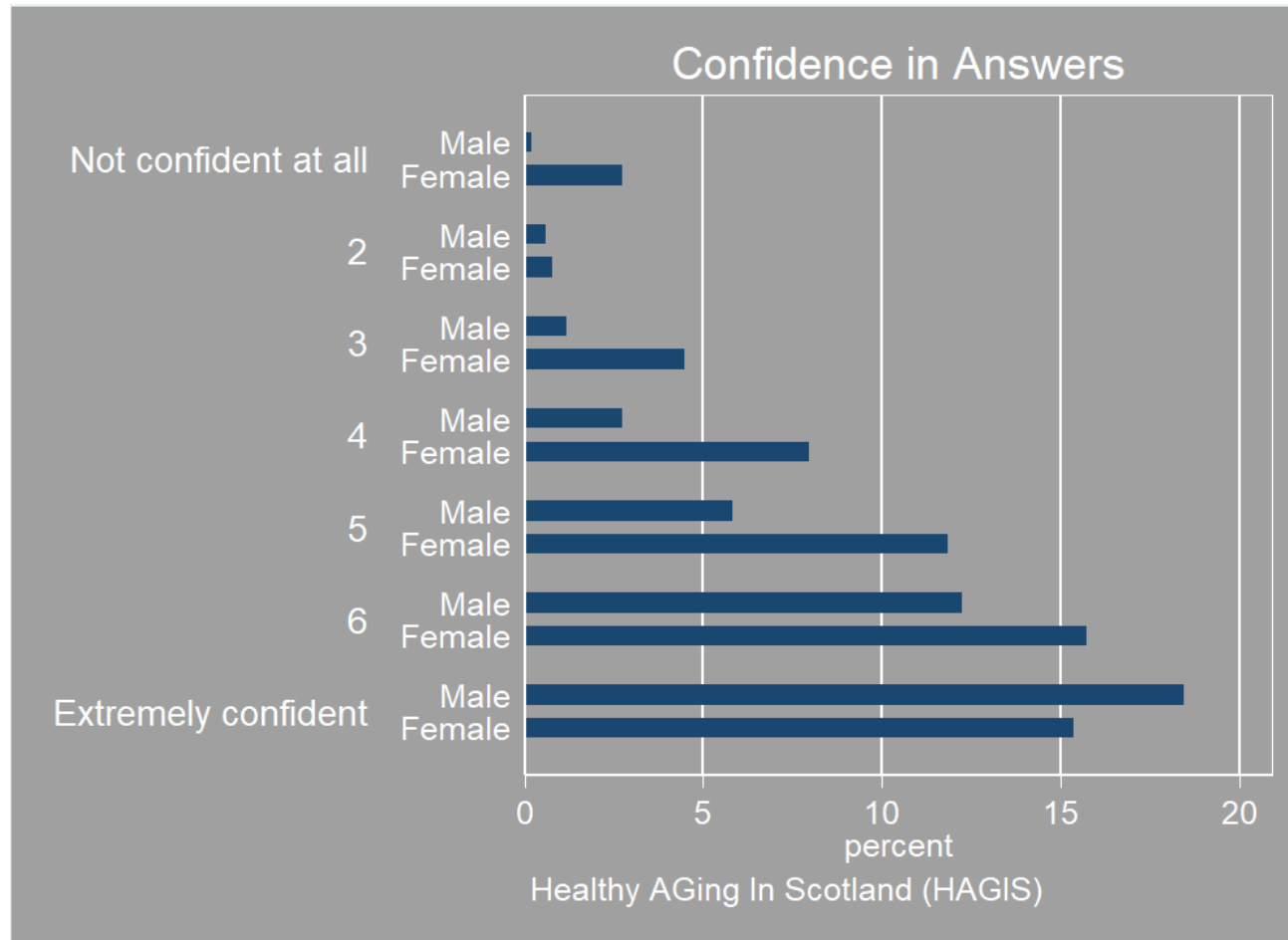
# Hagis Sampling Strategy



# Cognitive Ageing Crystallised Intelligence Scores



# Financial literacy - confidence in responses





# Response Rates

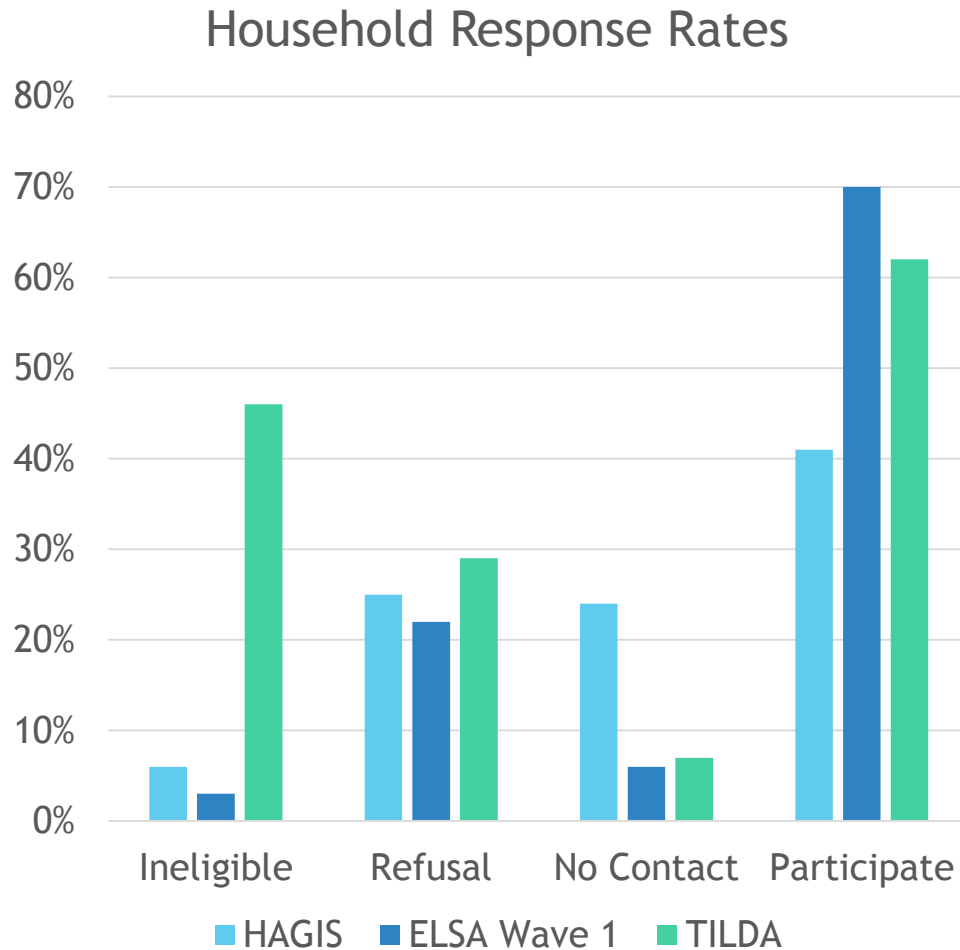


- ▶ Of 3088 households,
  - ▶ 1411 (46%) not yet approached
  - ▶ 1677 (54%) approached
  
- ▶ Of 1677 households approached
  - ▶ 109 (6%) have no over 50s
  
- ▶ Of 1568 eligible households approached\*
  - ▶ 383 (24%) not contactable
  - ▶ 148 (9%) opted out
  - ▶ 387 (25%) refused
  - ▶ 650 (41%) consented to take part

Why no over 50s?

1. CHI 24 out of date?
2. Interviewer reported inaccurate information?
3. Useful means of saying No to survey?

# Response Rates



## ▶ HAGIS

- ▶ 2 stage cluster sample from PAF
- ▶ Screened by NRS for eligibility

## ▶ ELSA (Natcen Social Research, 2016)

- ▶ Sample drawn from households that responded to Health Survey for England between 1998 and 2011

## ▶ TILDA (Barrett et al., 2011)

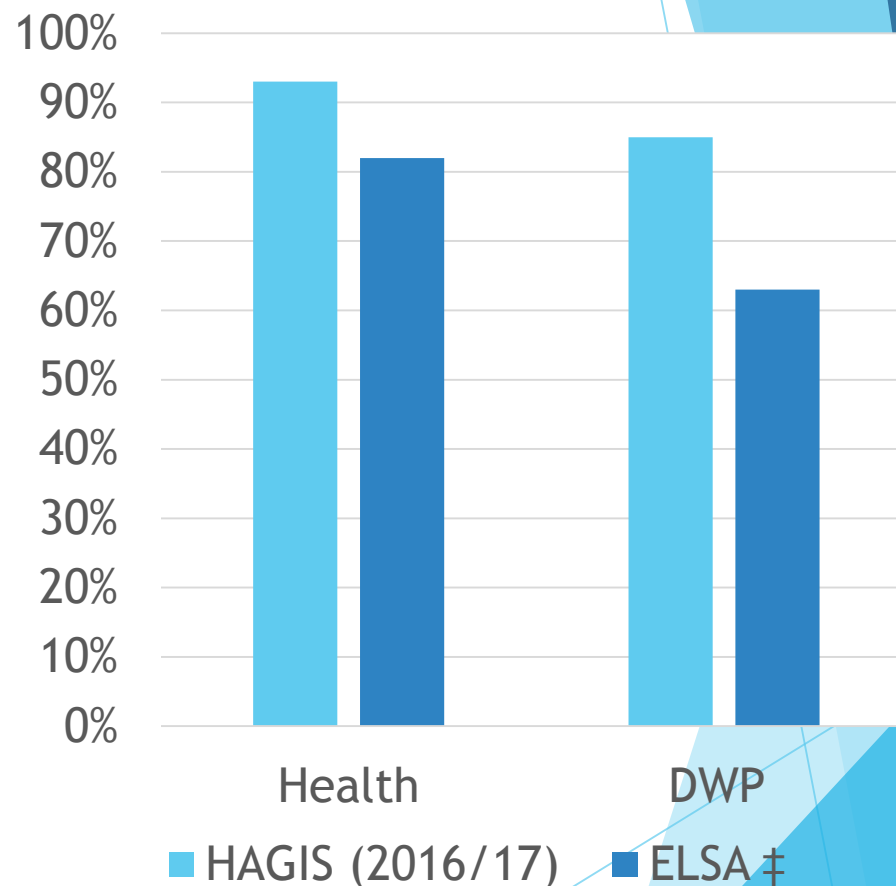
- ▶ 2 stage cluster sample: 'geographic cluster' and residential address
- ▶ No screening of household

# Data Linkage Consent



- ▶ NHS Health Records - **93%\***
  - ▶ Outpatients; Inpatients & Day Cases; Mental Health; Cancer Registration; Accident & Emergency; & Prescribing Information
- ▶ Dental - **92%\***
- ▶ Social Care Survey - **89%\***
  - ▶ Home Care, Self Directed Support
- ▶ Education - **88%\***
  - ▶ National Archives
- ▶ DWP & HMRC - **85%\***

\* Confirmed responses n=482



‡ (Sakshaug et al, 2012)

† (Knies & Burton, 2014)

# Data Linkage - Health Characteristics of Drawn Sample from 5 years of Health Records



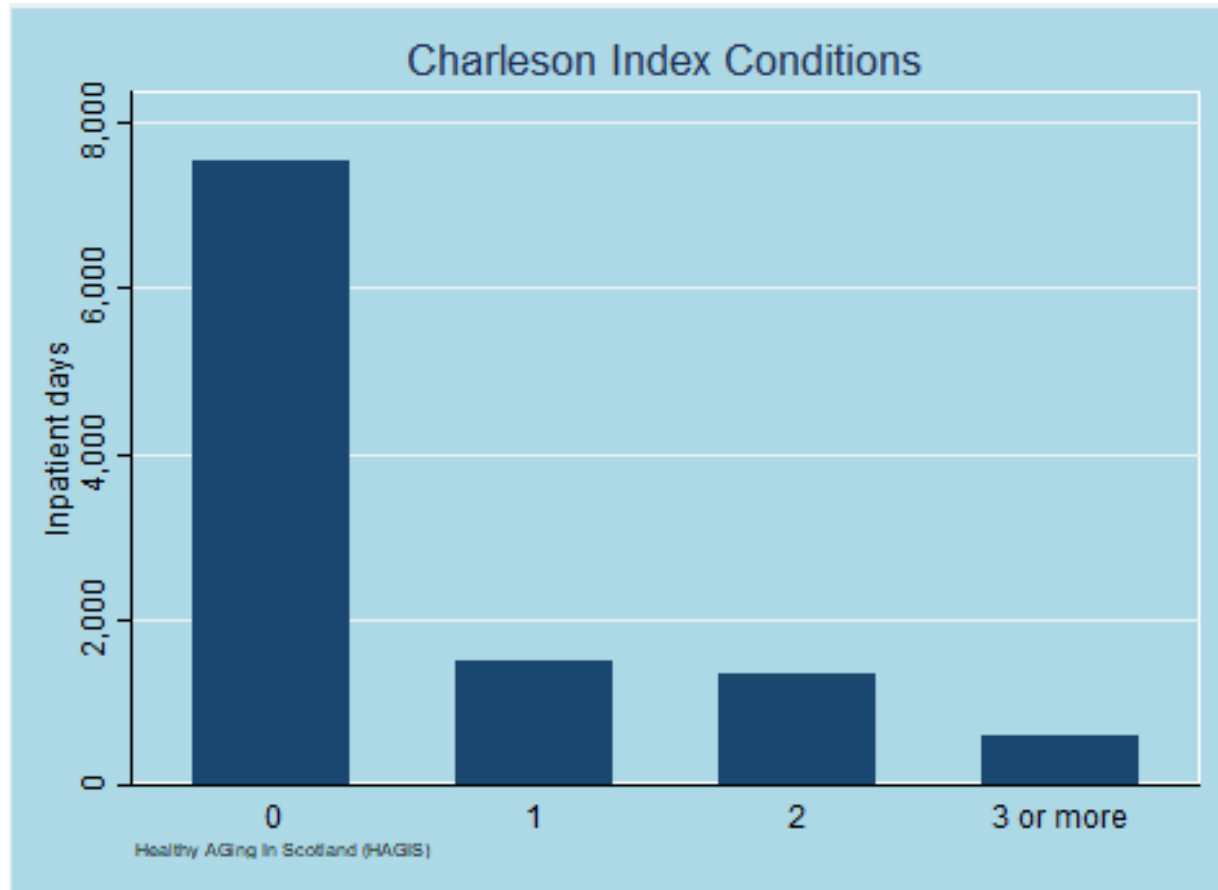
**As share of inpatient days in the drawn sample**

**5.5 Per Cent With Diabetes**

**11.1 Per Cent With Cancer**

**7.8 Per Cent With Heart Disease**

# Health Characteristics of Drawn Sample - Charlson Co-morbidity Index





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