Developing the Use of Administrative Data in GROS

General Register Office
for
SCOTLAND
information about Scotland's people

Ganka Mueller

Using and Improving Population and Household Statistics, 30 October 2009

Alternative Sources Branch

- *Admin sources*

- *Scottish Longitudinal Study*

Areas of application

- Traditional Census

  target fieldwork, design coverage assessment and adjustment, Quality Assure outputs

- Inter-censal estimates

  Improving Population and Migration Statistics

- Complement or replace current census approaches

  Beyond 2011 ,7 May 2009

  http://www.statistics.gov.uk/about/data/methodology/specific/population/future/imps/updates/downloads/Beyond_2011_presentations_7th_May.pdf

Using Administrative Data

- Directly:

  GP registrations – internal migration for population estimates

  Council tax systems – household and dwelling estimates

- Indirectly:

  Quality assurance – census and inter-censal estimates

  Census design and operations – coverage assessment and adjustment, enumeration targeting

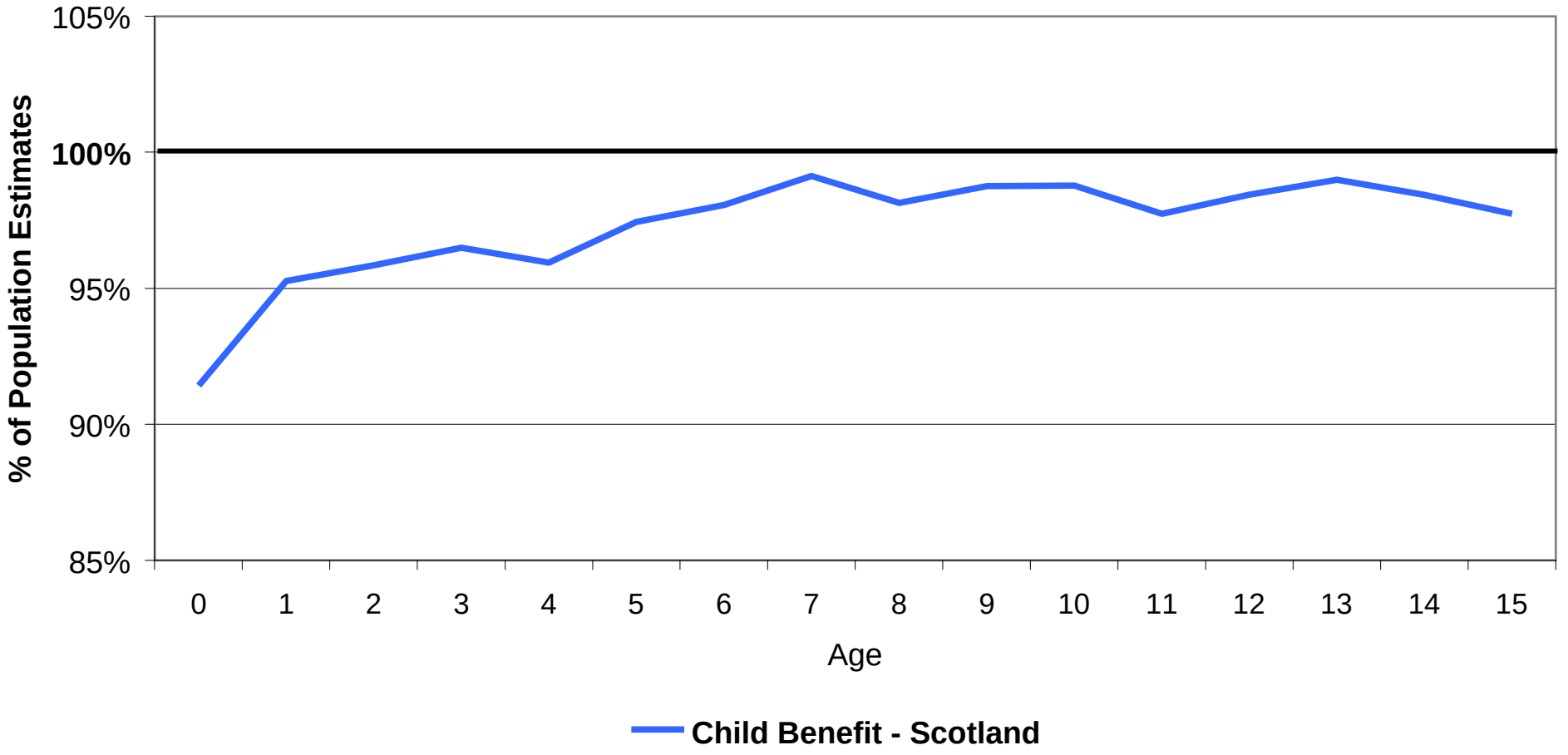
Sources

- School Census
- Child Benefit
- DWP State Pension Age Benefits
- NHS Central Register and Community Health Index
- Council Tax Systems
- DWP Other Benefits
- Electoral Register
- Higher Education Student Record (HESA)
- National Insurance Recording System (NIRS)
- Local Data Sources (Council Tax, Entitlement Card, etc)

Challenges

- Coverage: definitions, geographical scope
- Timing, currency
- Breadth of information
- Quality (completeness, accuracy, consistency)

Administrative Data on Children Compared to Population Estimates, 2007, Scotland



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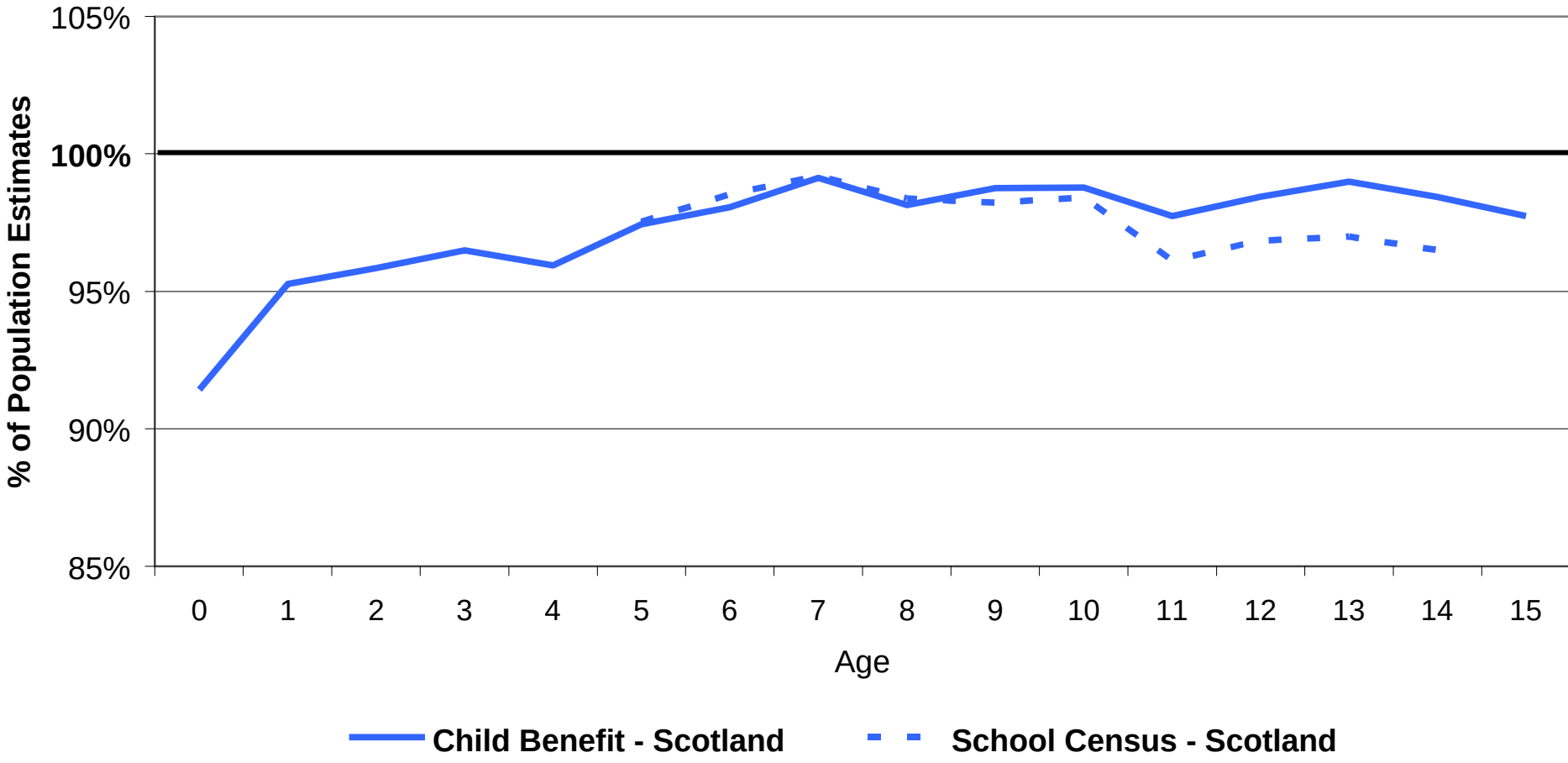
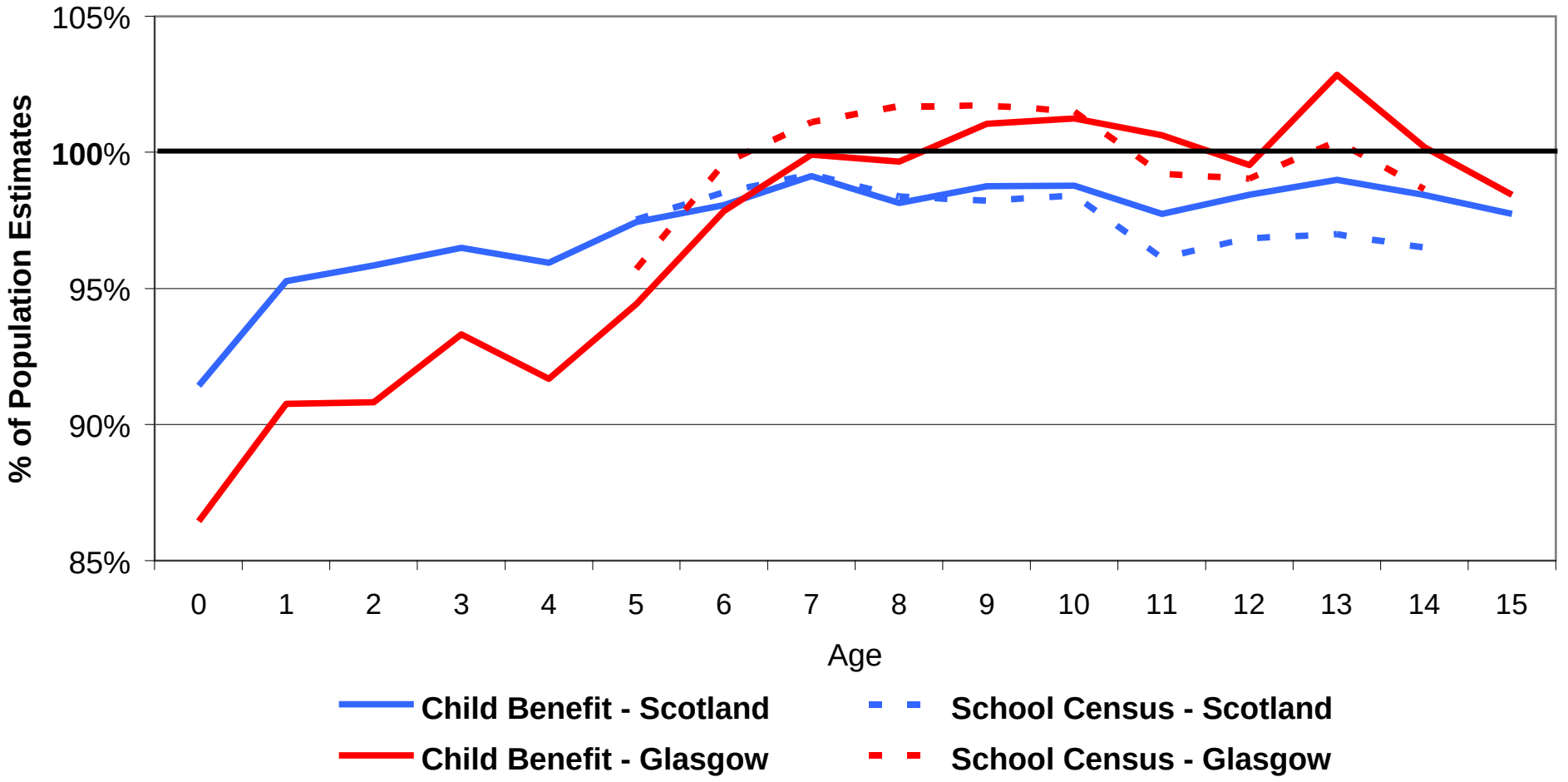
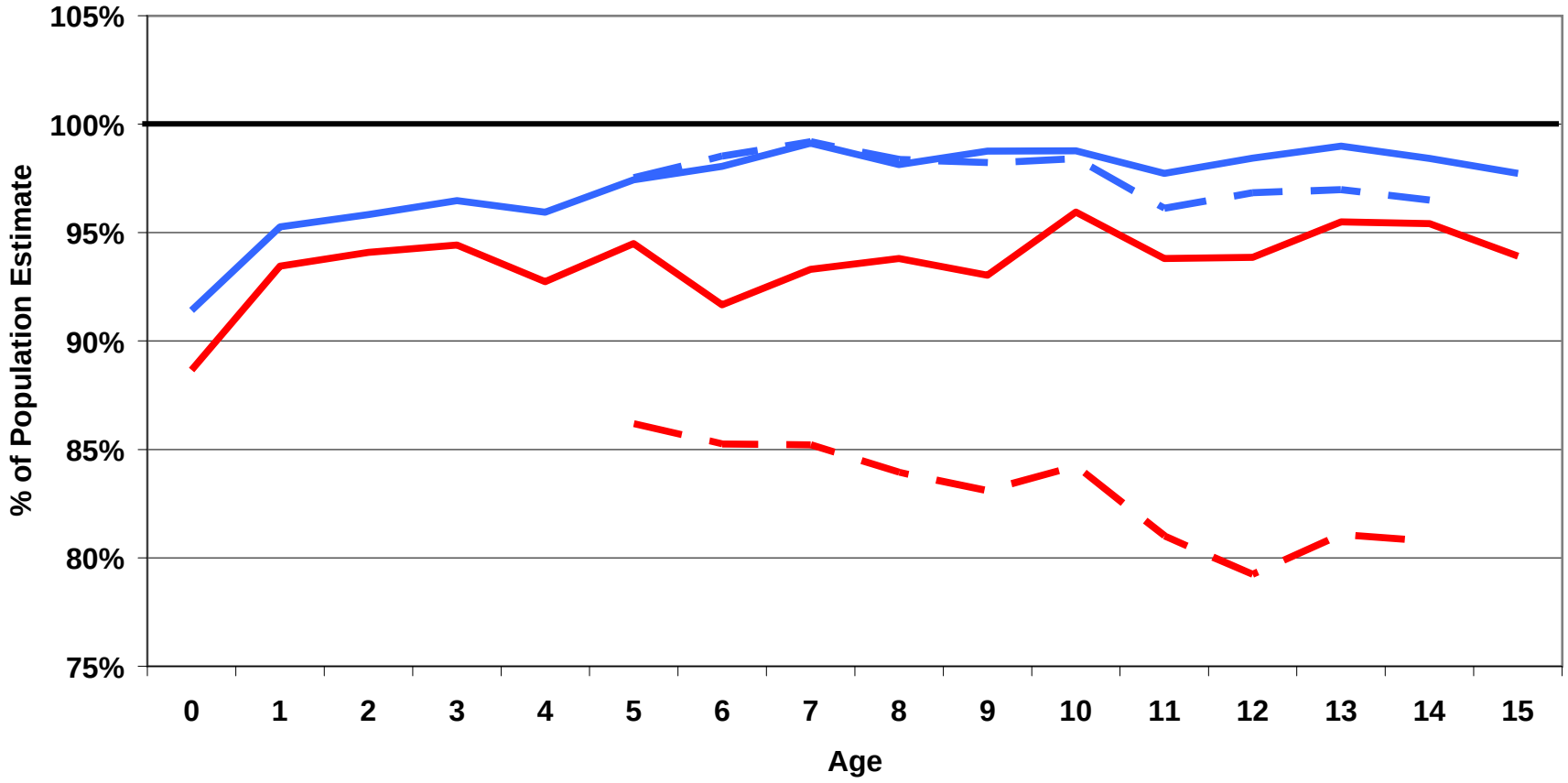


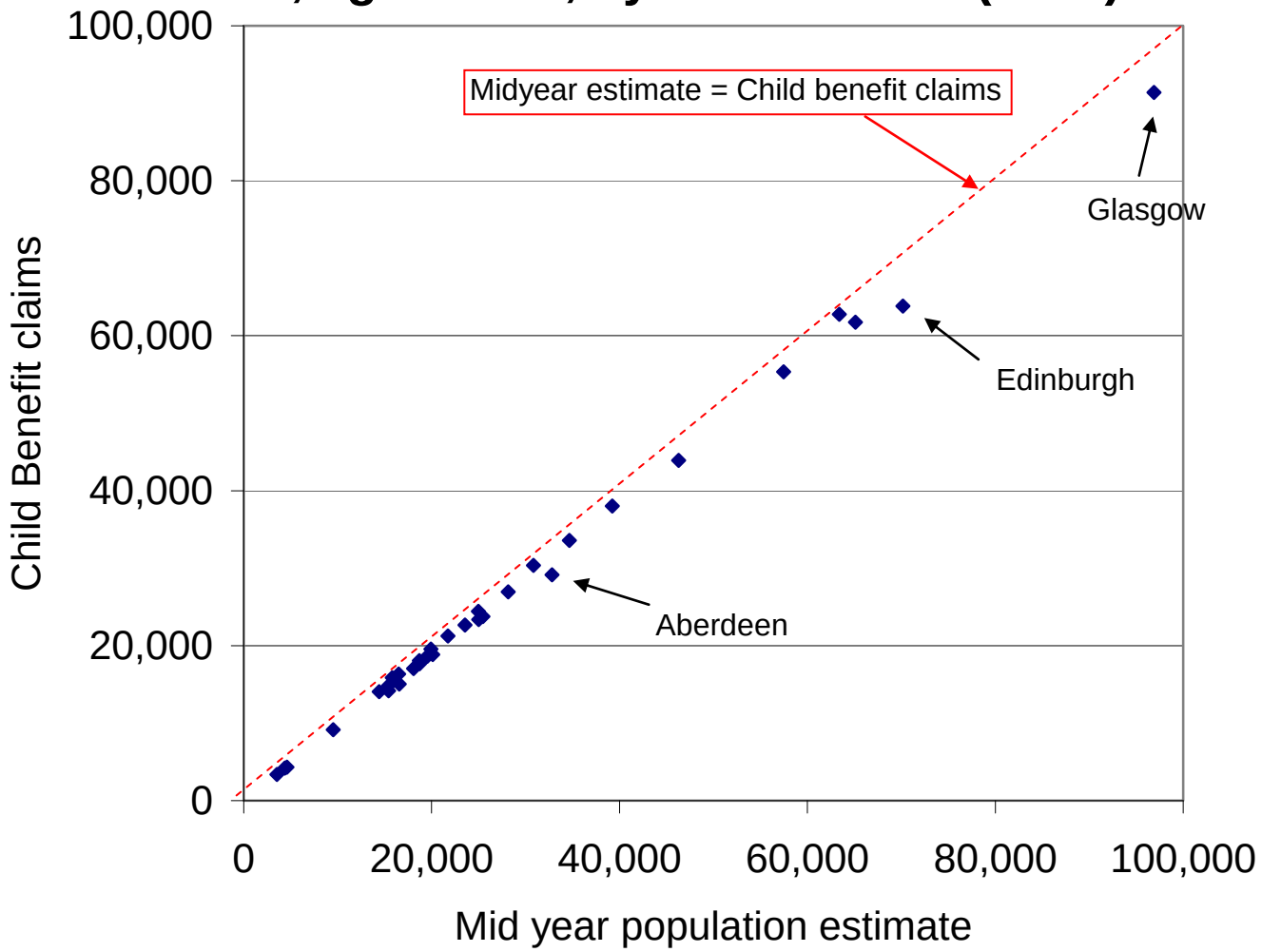
Administrative Data on Children Compared to Population Estimates 2007, Scotland and Glasgow



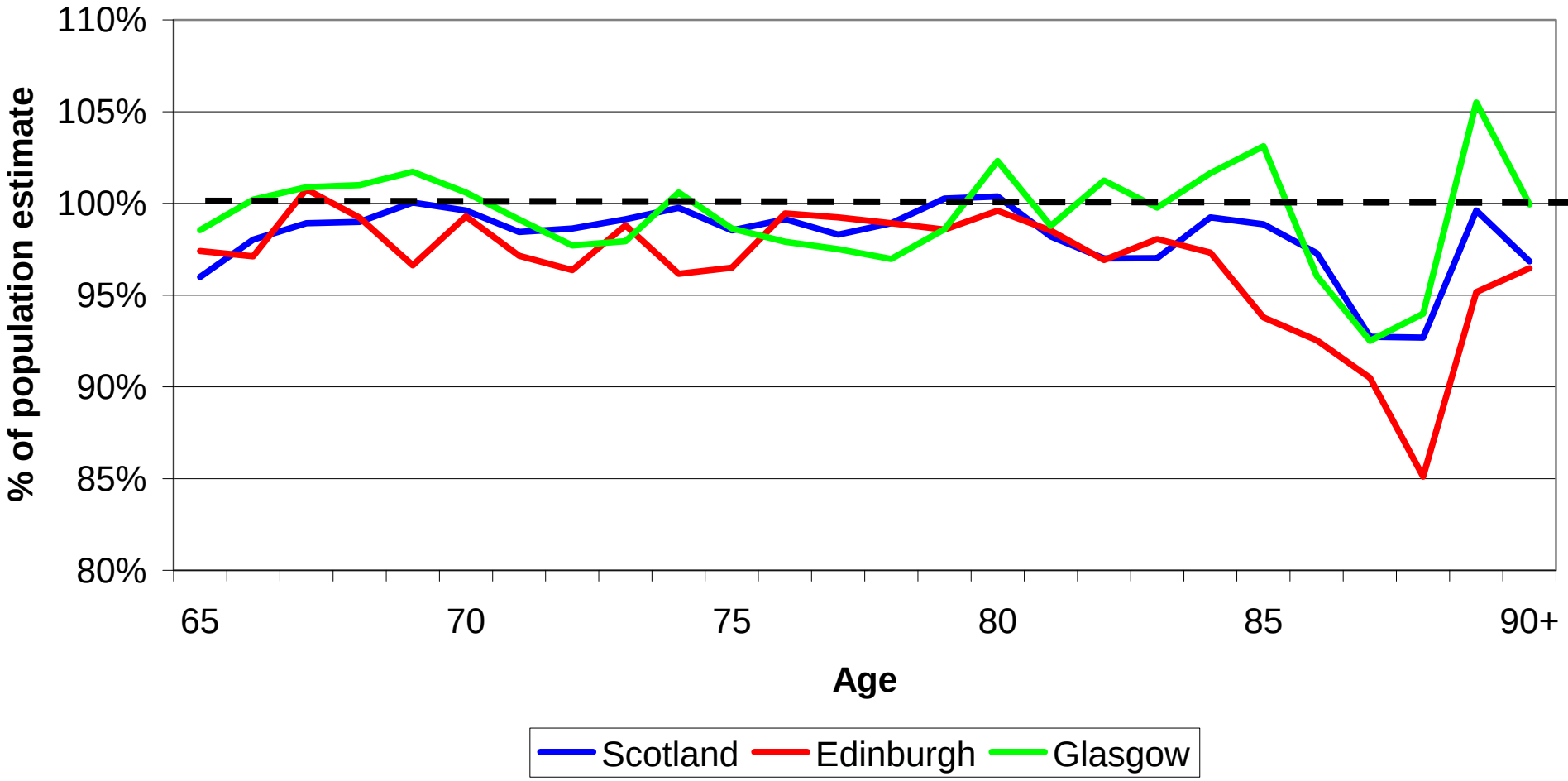
Administrative Data on Children Compared to Population Estimates, Scotland and Edinburgh 2007



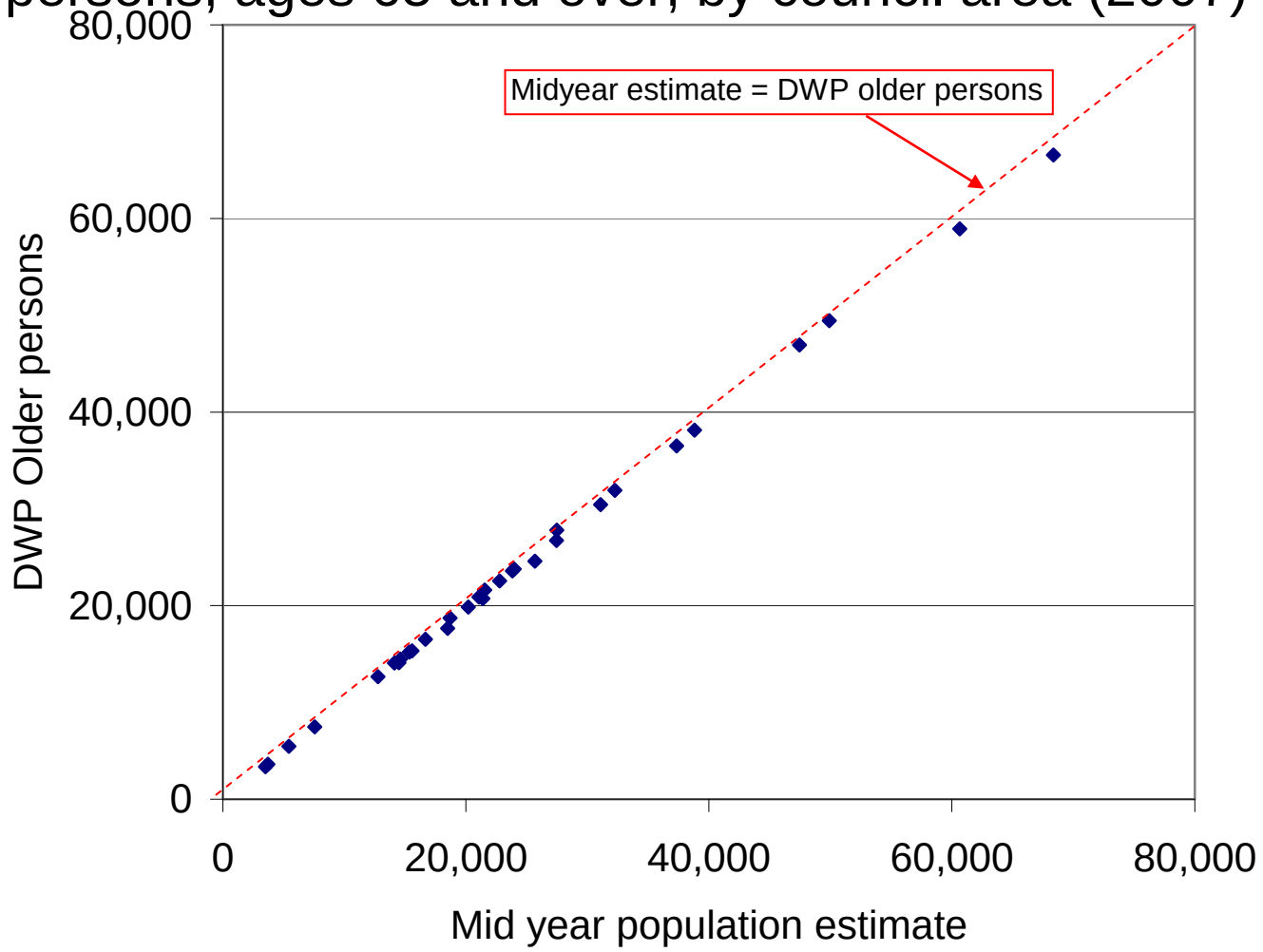
Comparison of population estimates and child benefit claims, ages 0 -15, by council area (2007)



Older Persons (65+) in Receipt of State Benefits Compared to Population Estimates, 2007

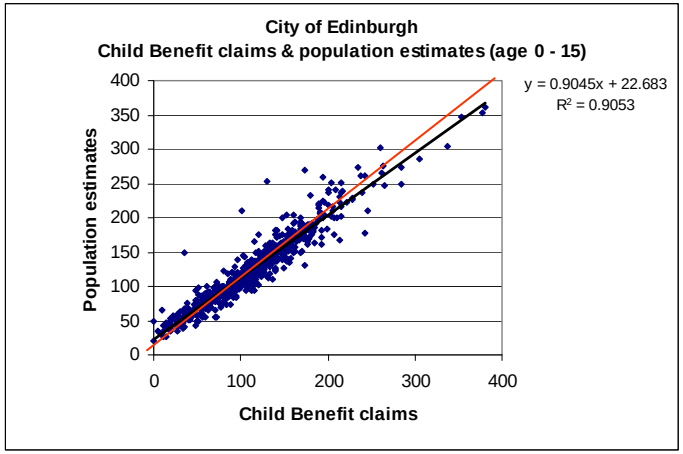


Comparison of population estimates and DWP older persons, ages 65 and over, by council area (2007)

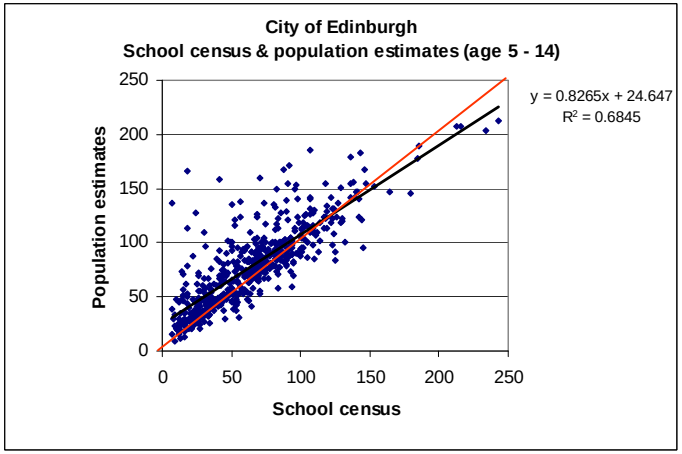


Data Zone Level Variation in Edinburgh for 3 Administrative Data Sources in Relation to MYE

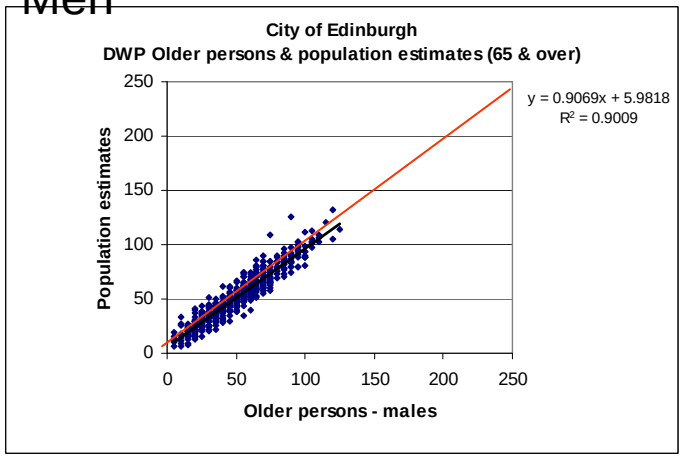
Child Benefit



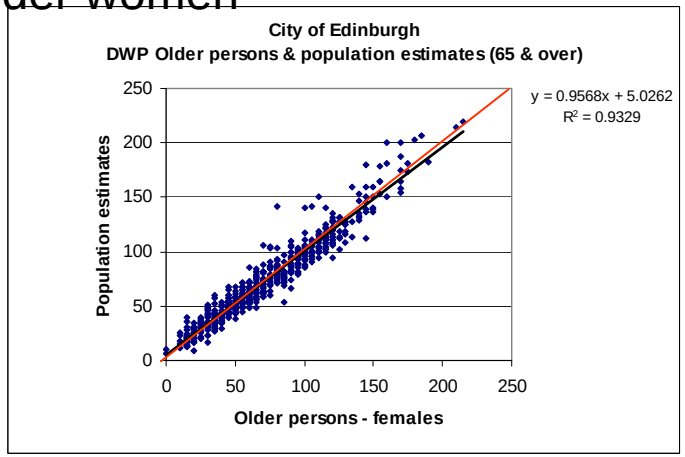
School Census



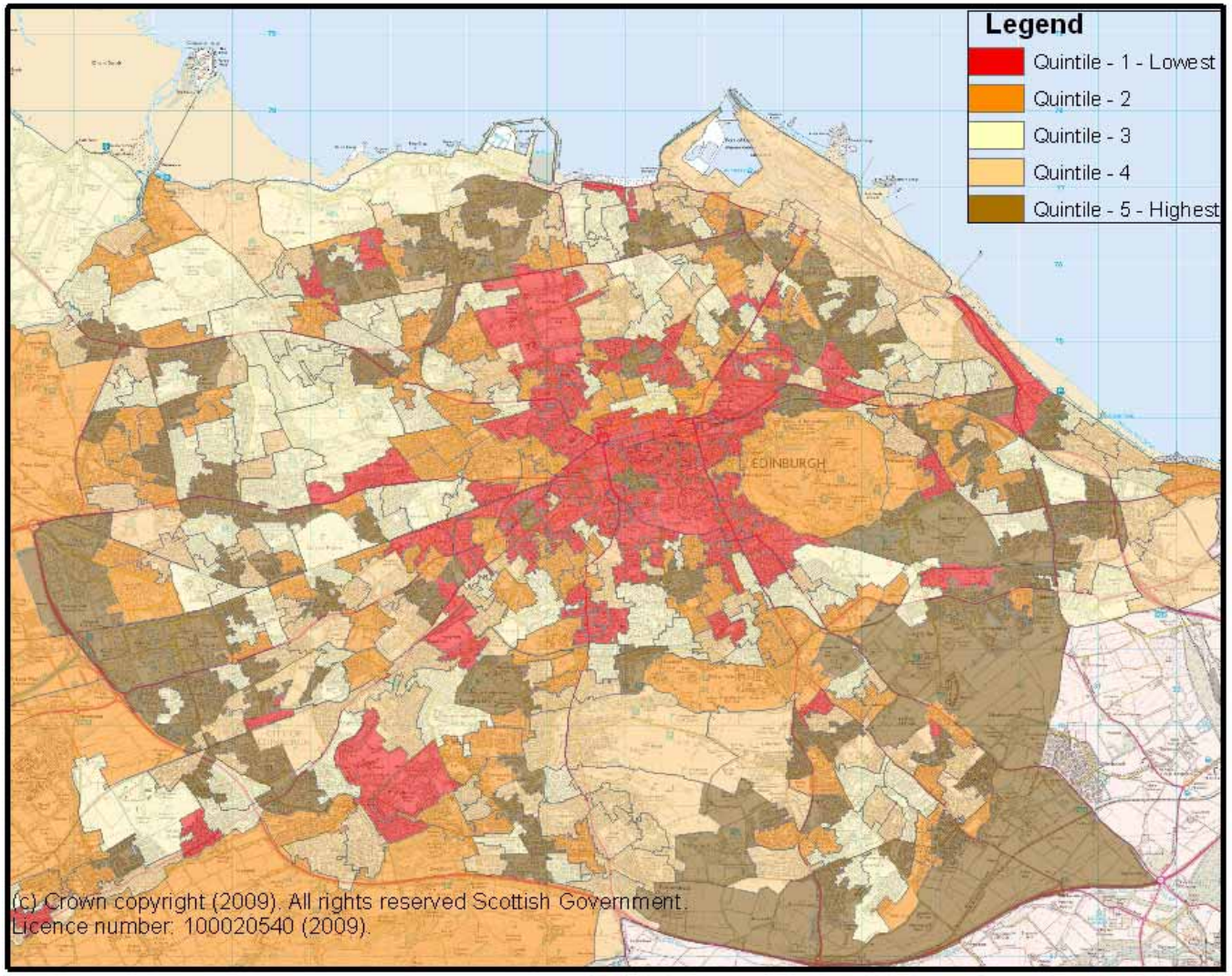
Older Men



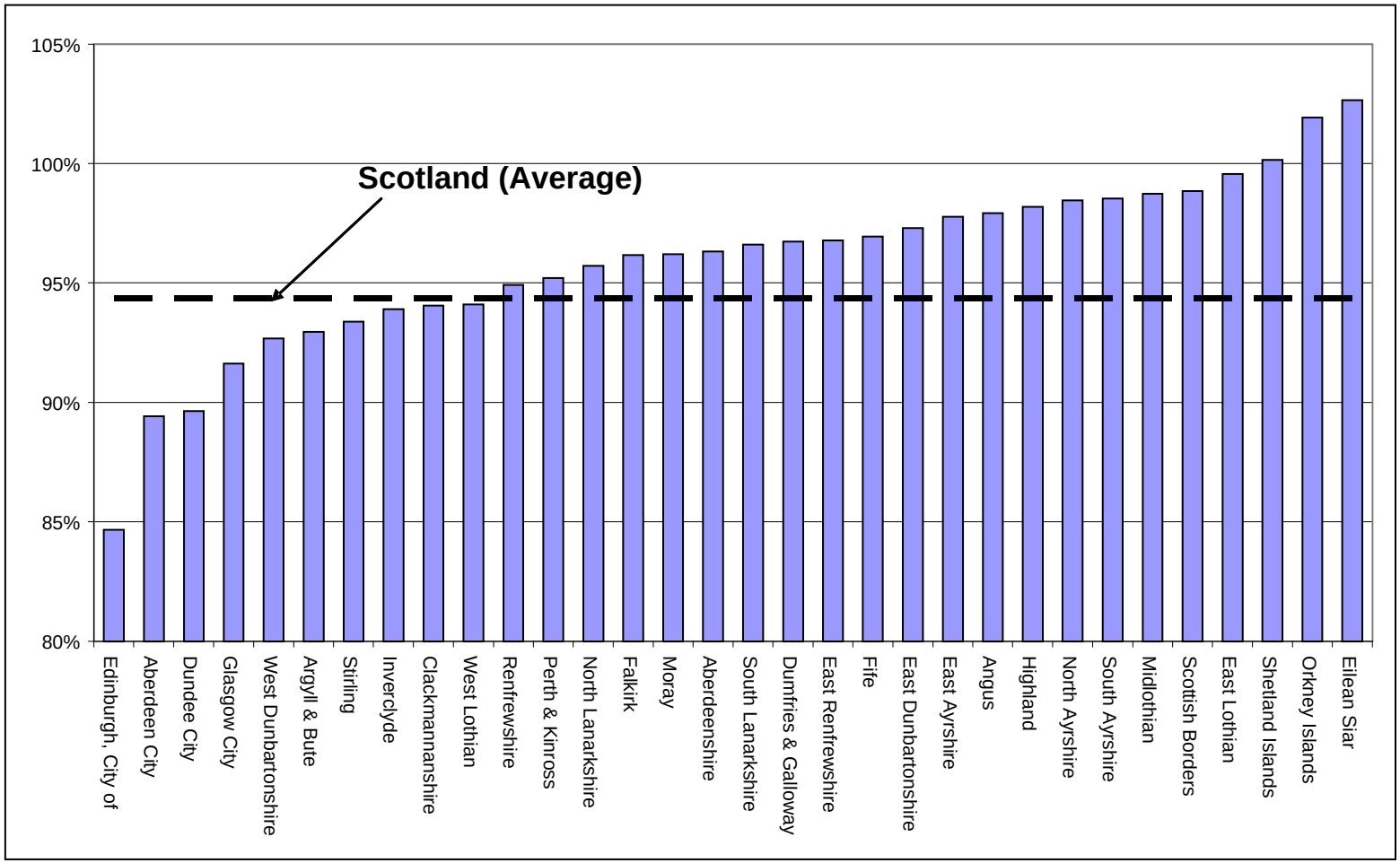
Older women



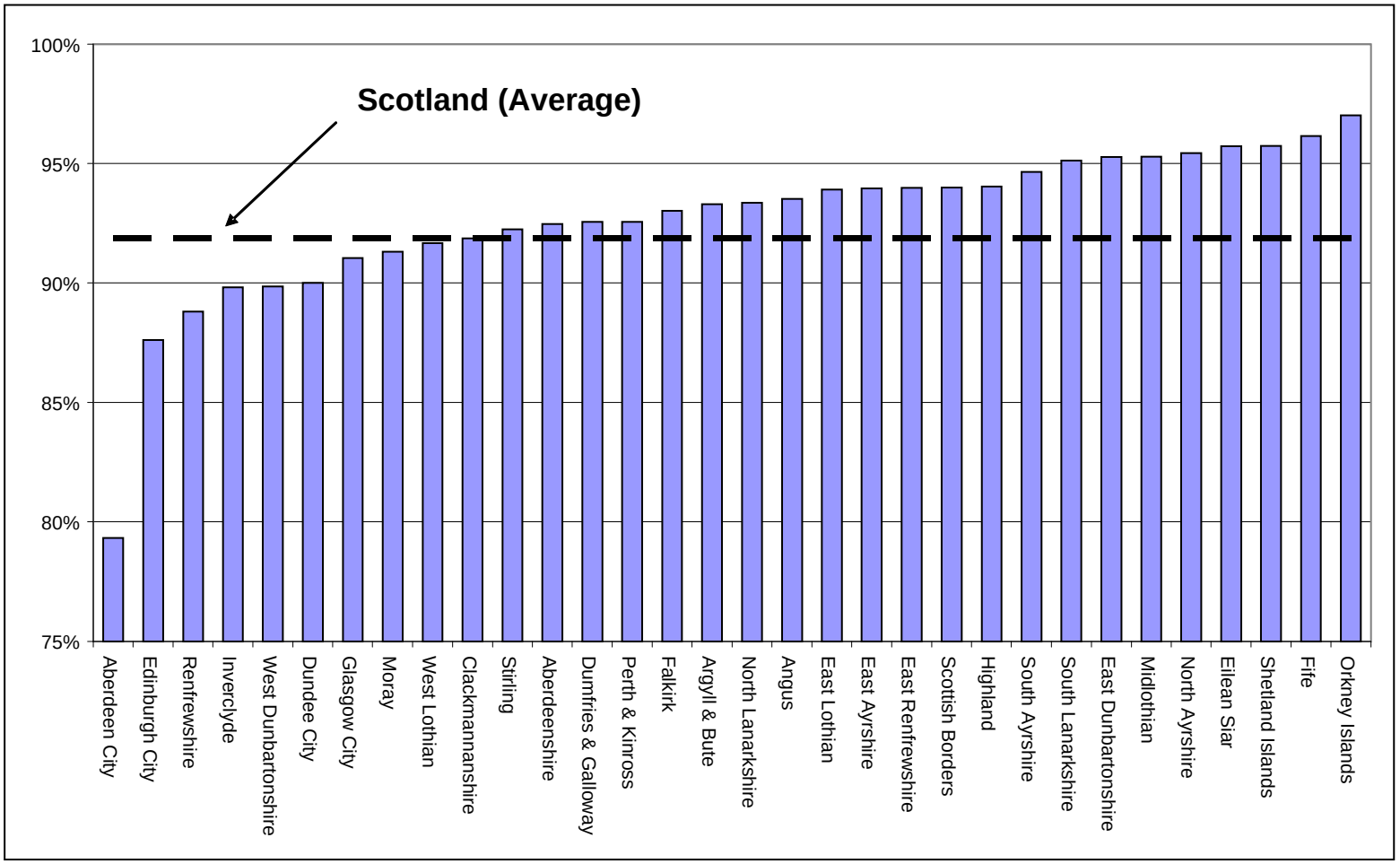
Proportion of School Age Children in MYE Covered by Child Benefit Data: Edinburgh, Data zones, 2007

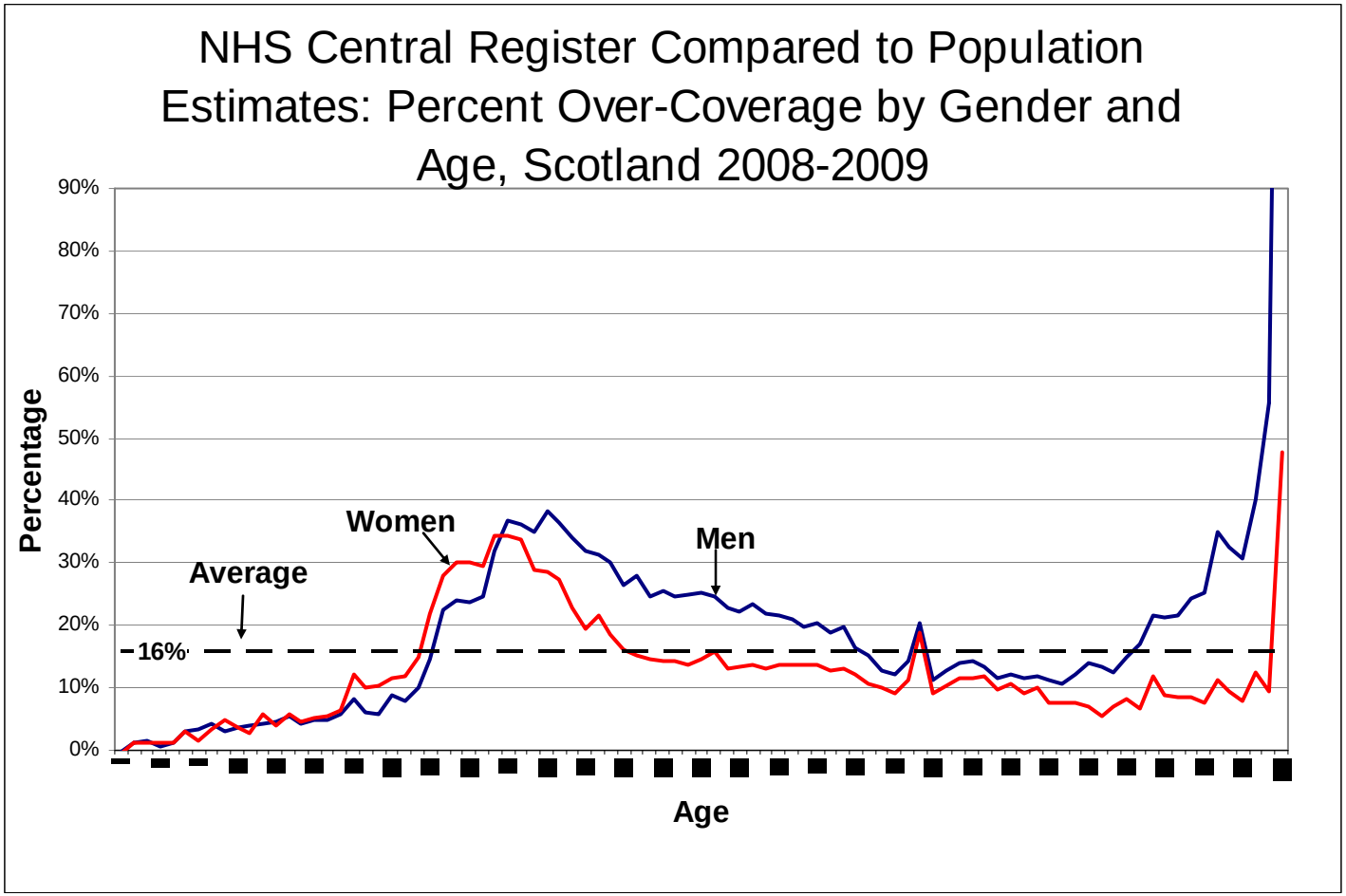


Persons on Electoral Register as a percentage of the Population Estimate (aged 18+), 2007

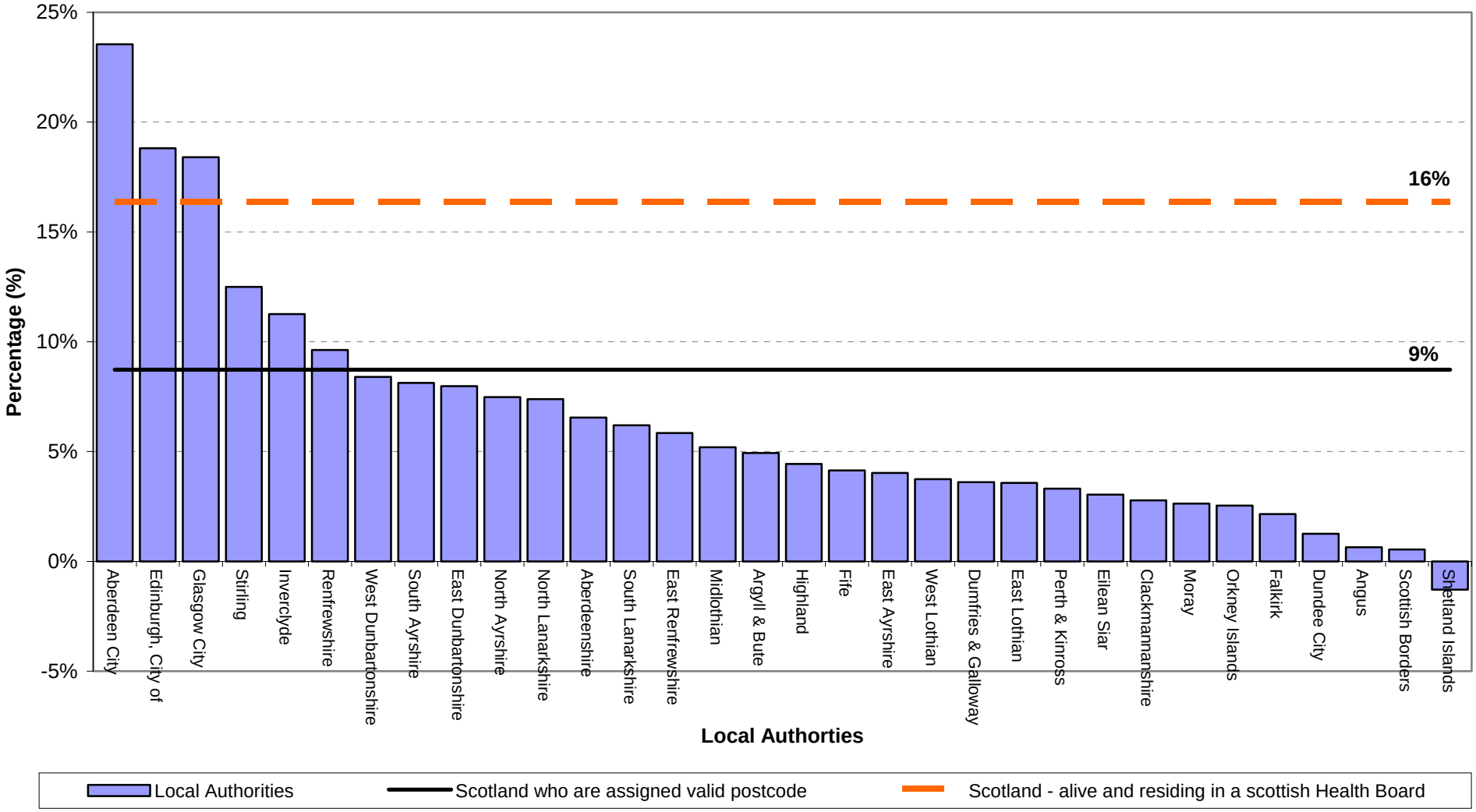


Households on Electoral Register as a Percentage of the Number of Occupied Dwellings, 2007

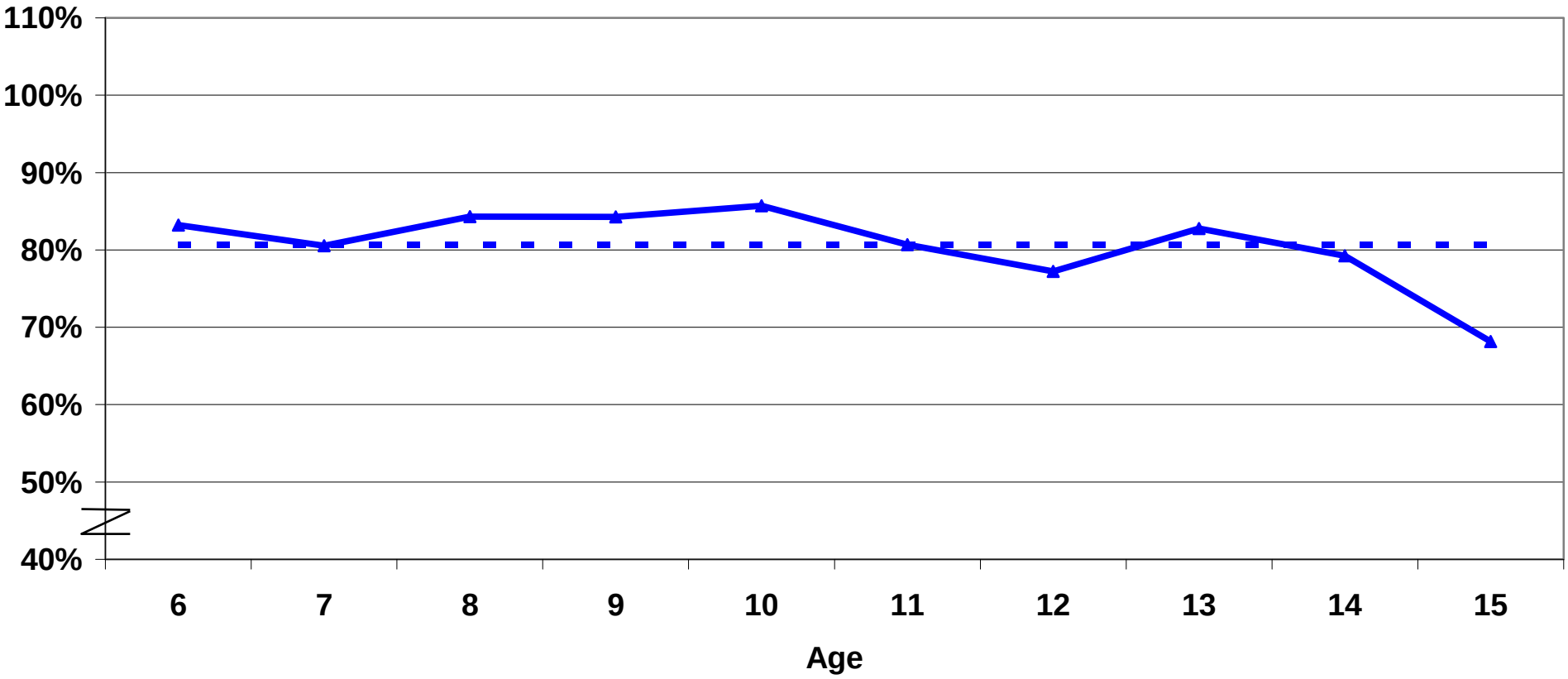



NHS Central Register Compared to Population Estimates: Percent Over-Coverage by Gender and Age, Scotland 2008-2009
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage
Women
Men
Average
16%
Age

Over-Coverage of NHSCR against MYE, by Local Authority, 2008

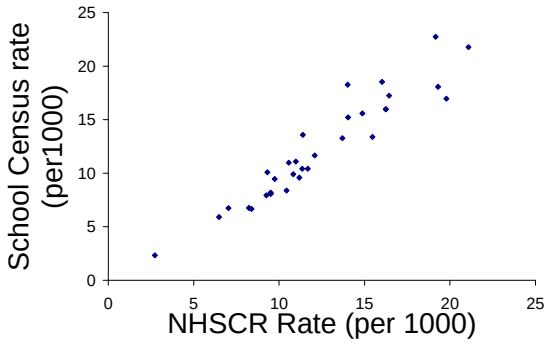


Internal Migration Compared: Percent of MYE (NHSCR-based) Moves Accounted for by School Census (2006/07), by Age

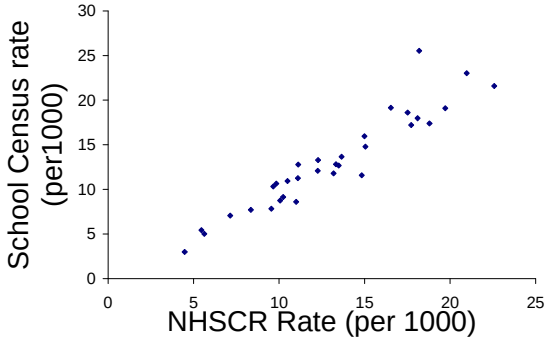


Internal Migration Across Council Areas: School Census and MYE (NHSCR-based) compared

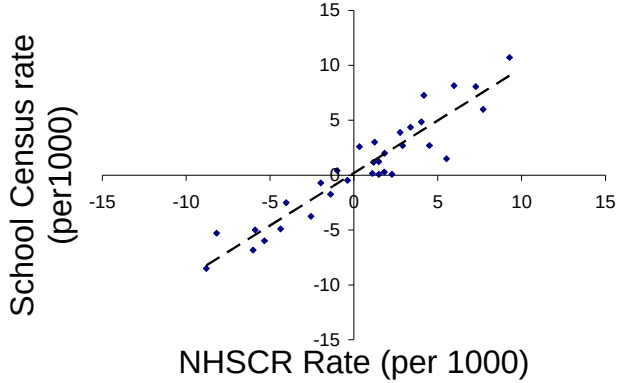
Outflows



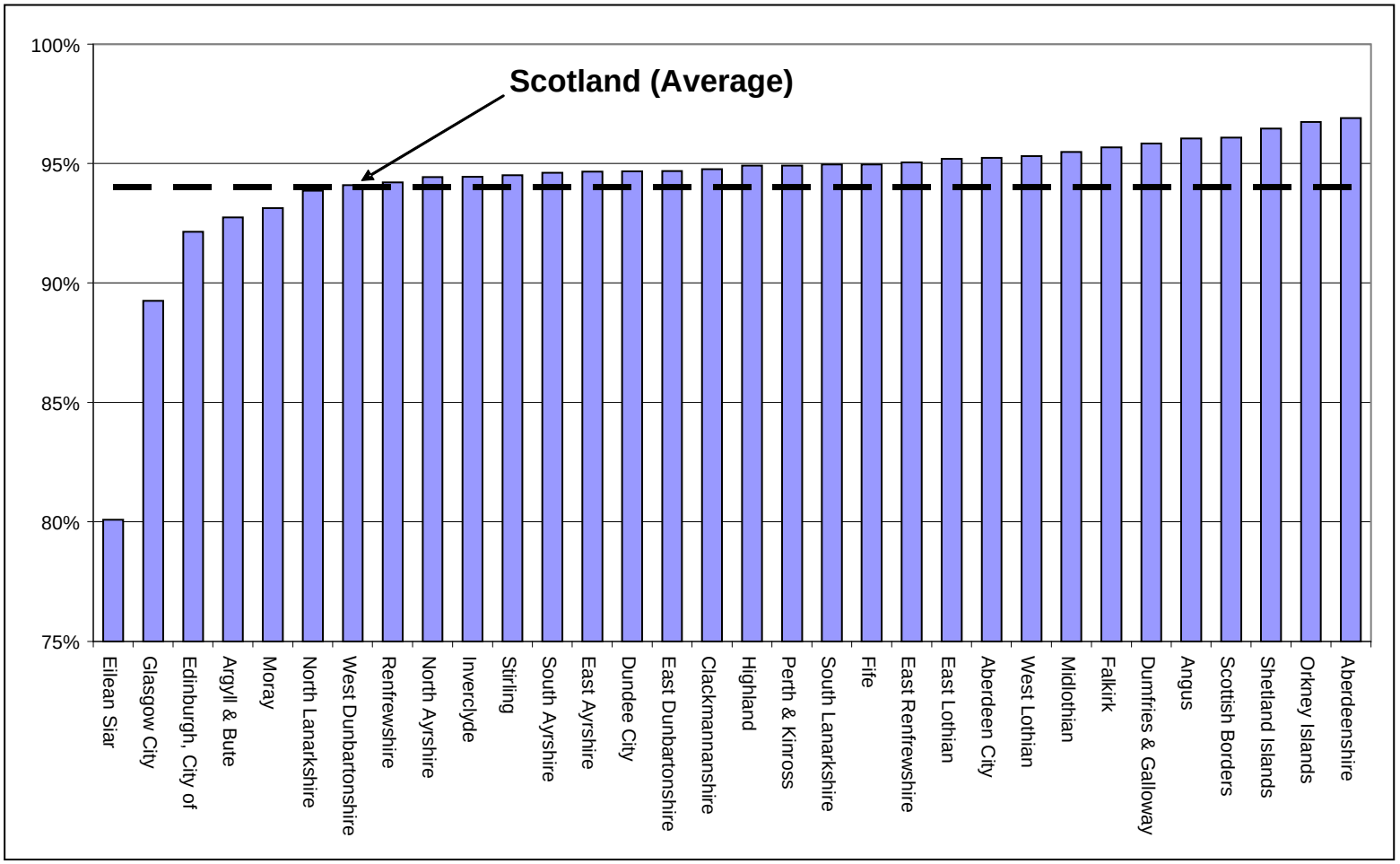
Inflows



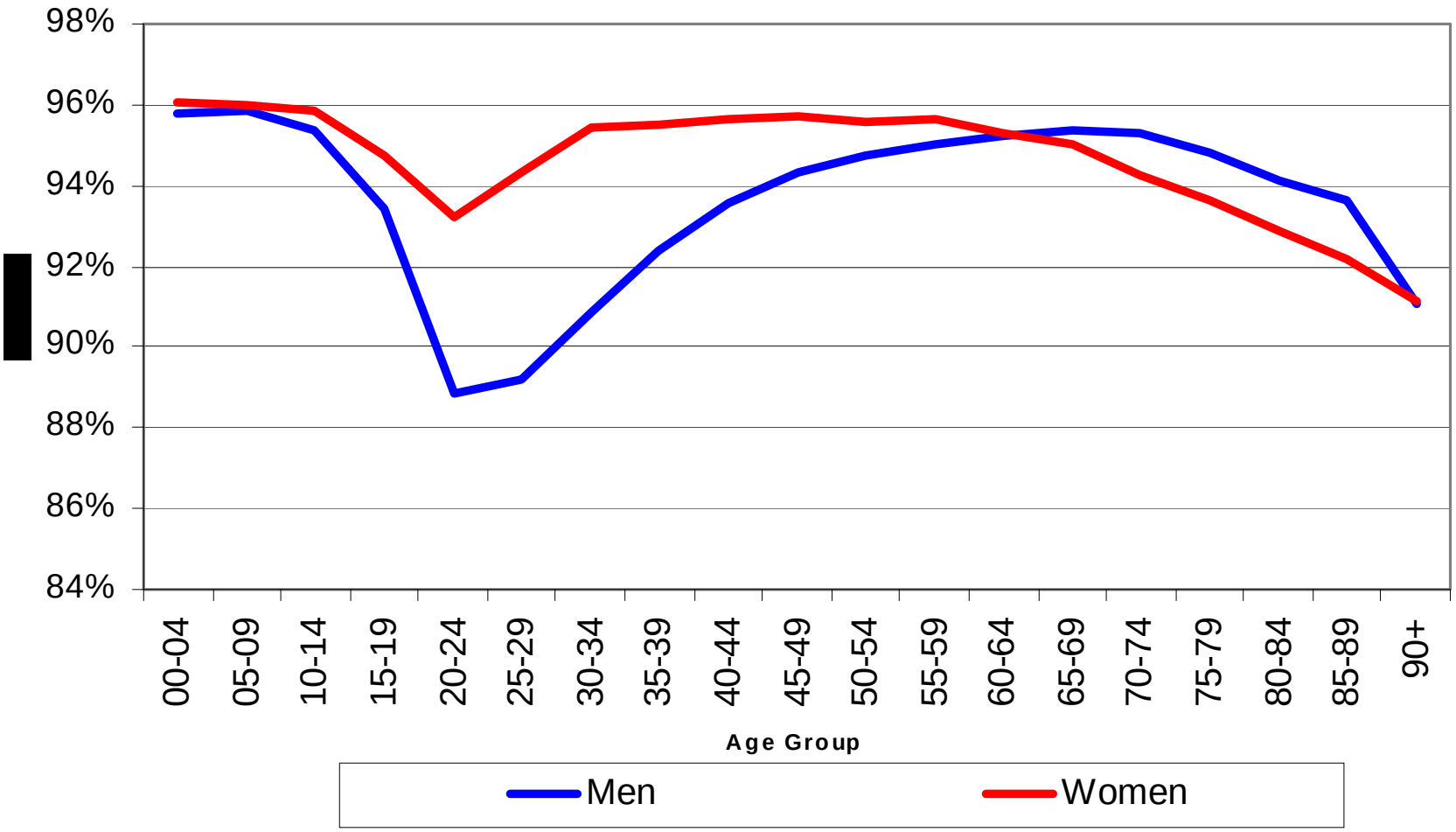
Netflows



Percentage of Census Records linked to the Community Health Index (CHI), 2001

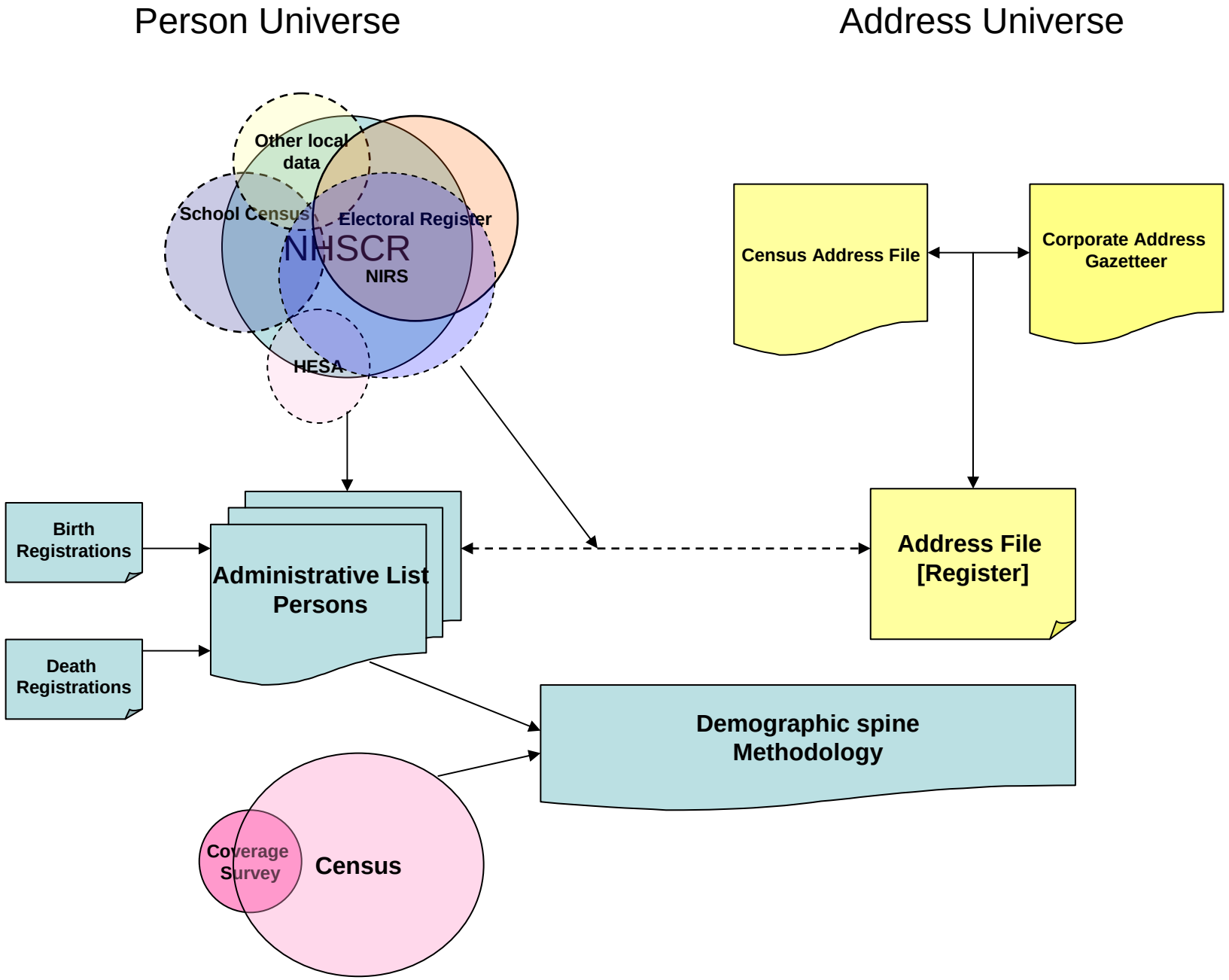


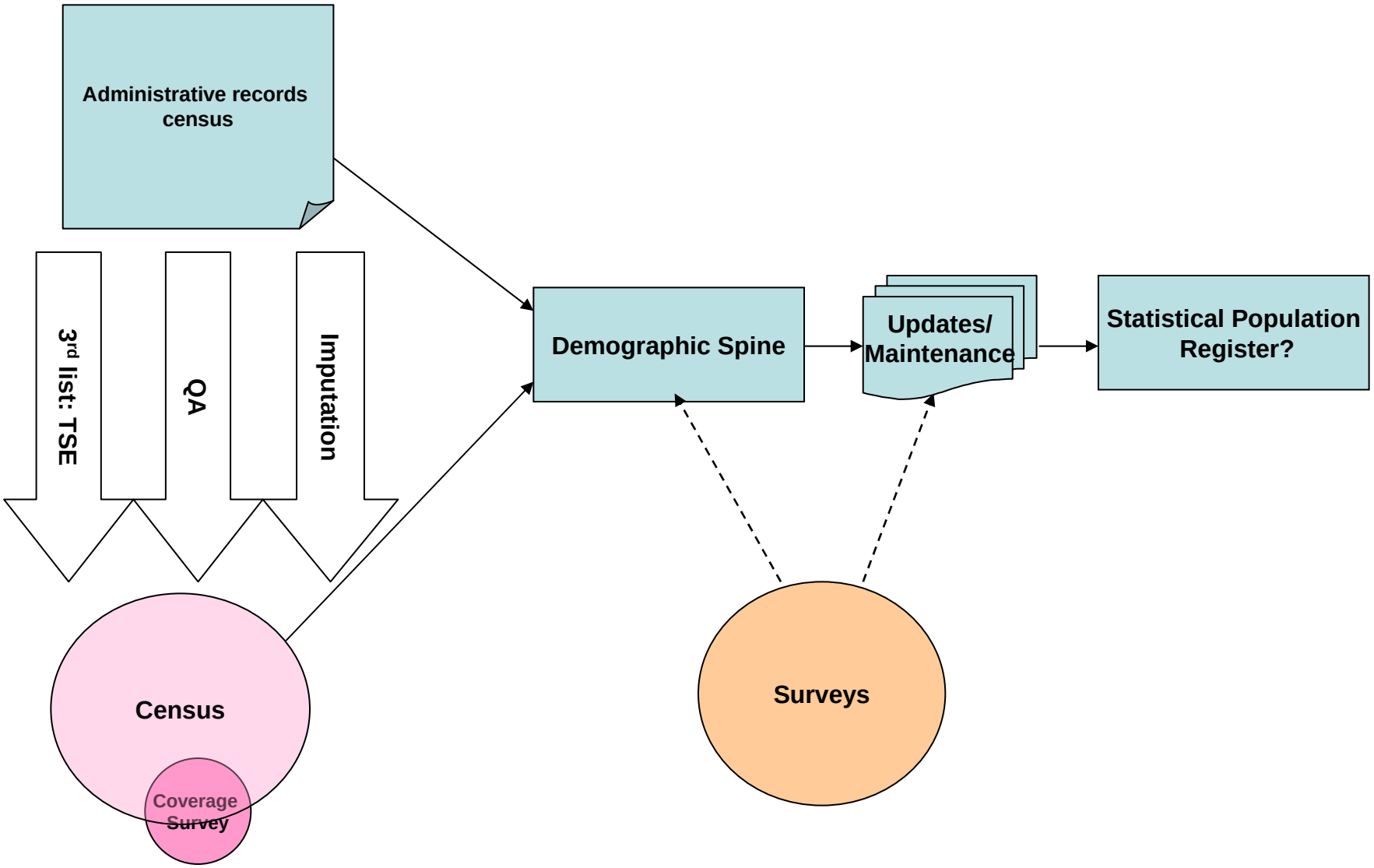
Proportion of Census Records Linked to CHI by Age and Gender, 2001



Administrative Data Integration

- Objectives:
  - Gain information about feasibility of conducting an administrative records census: develop methods
  - Explore potential to support and supplement traditional census enumeration
  - Explore potential to support improvements to inter-censal population statistics
- Stages:
  - Development: Census Rehearsal (March 2009)
  - Implementation: Census (March 2011)


Person Universe
Address Universe
Other local data
School Census
Electoral Register
NHSCR
NIRS
HESA
Census Address File
Corporate Address Gazetteer
Birth Registrations
Death Registrations
Administrative List Persons
Address File [Register]
Demographic spine Methodology
Coverage Survey
Census


Administrative records census
3rd list: TSE
QA
Imputation
Demographic Spine
Updates/ Maintenance
Statistical Population Register?
Census
Coverage Survey
Surveys

Any Questions?

Future improvements

- Improve quality of population estimates

  IMPS: HE student record to assess quality of GP register;
  School Census: complement information on migrant stock and flows;
  NINO allocations: estimate international migration flows
  SAPE quality assurance pilot

- Complement or replace current Census approaches

  Beyond 2011: 7 May 2009

  http://www.statistics.gov.uk/about/data/methodology/specific/population/future/imps/updates/downloads/Beyond_2011_presentations_7th_May.pdf

Drivers

- More diverse and mobile populations
- Quality of statistical outputs: response rates, coverage
- User demand
- Cost and efficiency
- Respondent burden

Sources (1)

- School Census:

  Current use:

  QA of stock estimates children, ‘Hard to Count’ index for census purposes, QA census outputs

  Potential use: internal migration flows, international migration (stocks and flows)

- Child Benefit:

Current: QA Pop estimates and census outputs

Potential

- State pension age benefits

Current: QA pop estimates and census outputs

Potential: emigration flows

- Electoral Statistics,

Potential: Household estimates, migration flows, Census enumeration targeting

- NHSCR (Administrative health data)

Current: Internal migration flows, cross-border flows

Potential:

Sources (2)

- HESA:

  Current use: QA of pop estimates (stock), ‘Hard to Count’ index for census purposes, QA census outputs, household estimates

  Potential use: internal migration flows, international migration (stocks and flows)

- NINO:

Current: A Pop estimates and census outputs

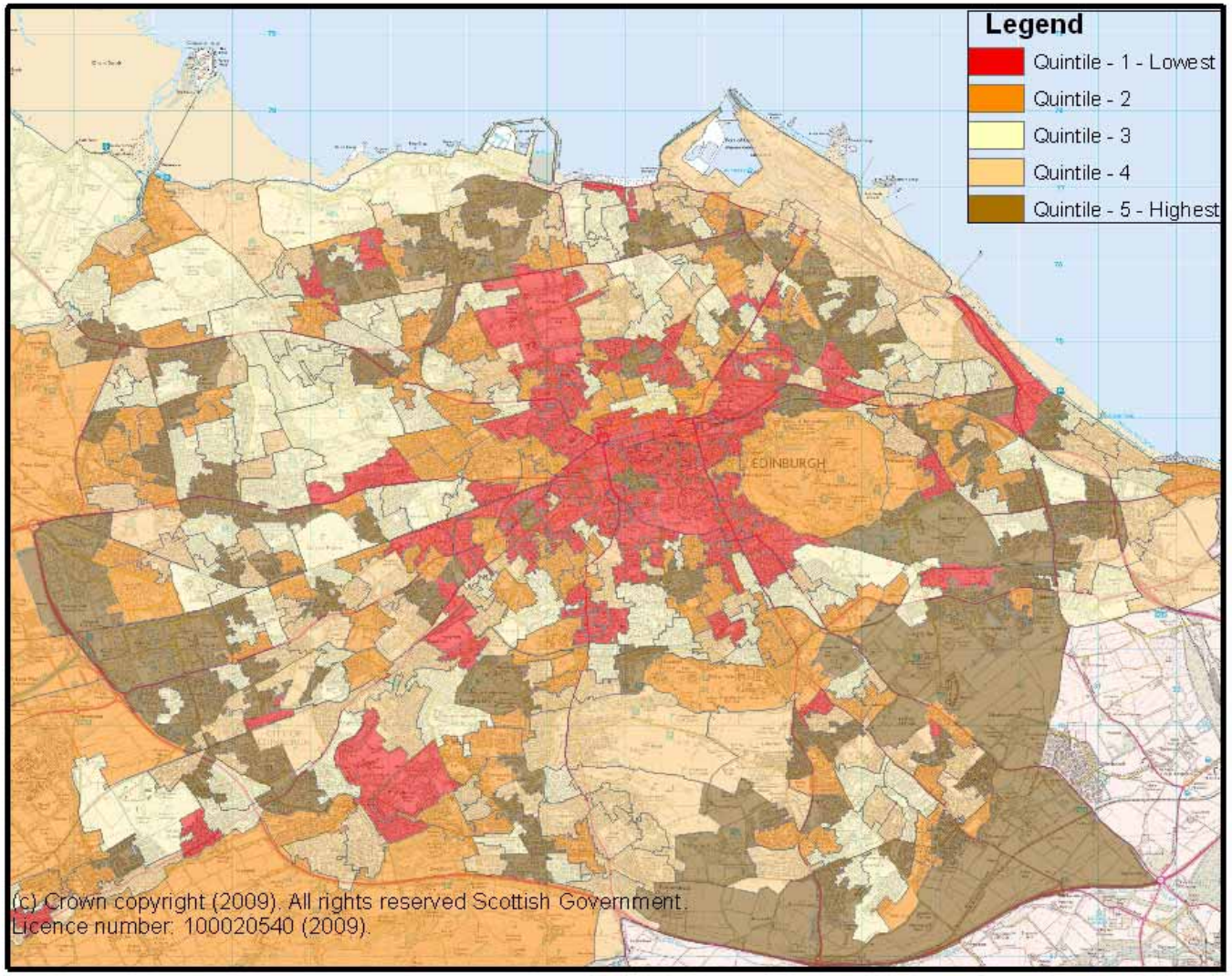
Potential

- Other state benefits

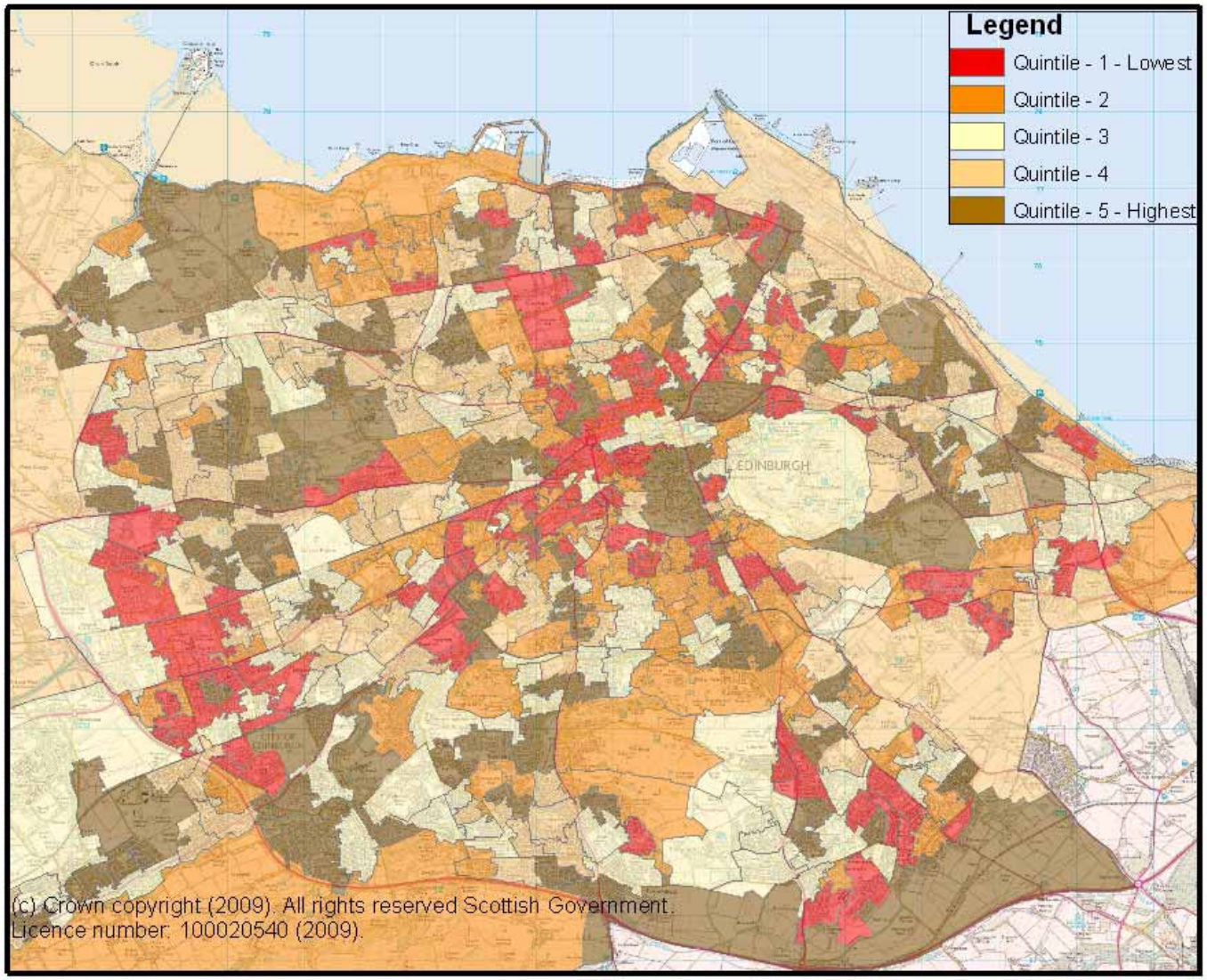
Current: QA pop estimates and census outputs

Potential: emigration flows

Proportion of School Age Children Covered by Child Benefit Data: Data zones, 2007



Older Persons (aged 65+): Data zones, 2007



Proportion of School Age Children Covered by the School Census: data zones, 2007