

Use of administrative data in the England and Wales Census, 2021

Cal Ghee
Office for National Statistics



Overview

- Summary of UK census designs
- Uses of administrative data
- Plans versus reality
- Summary of 3 areas of administrative data usage
 - Babies and young children
 - Students
 - Alternative Household Estimate
- Lessons learned

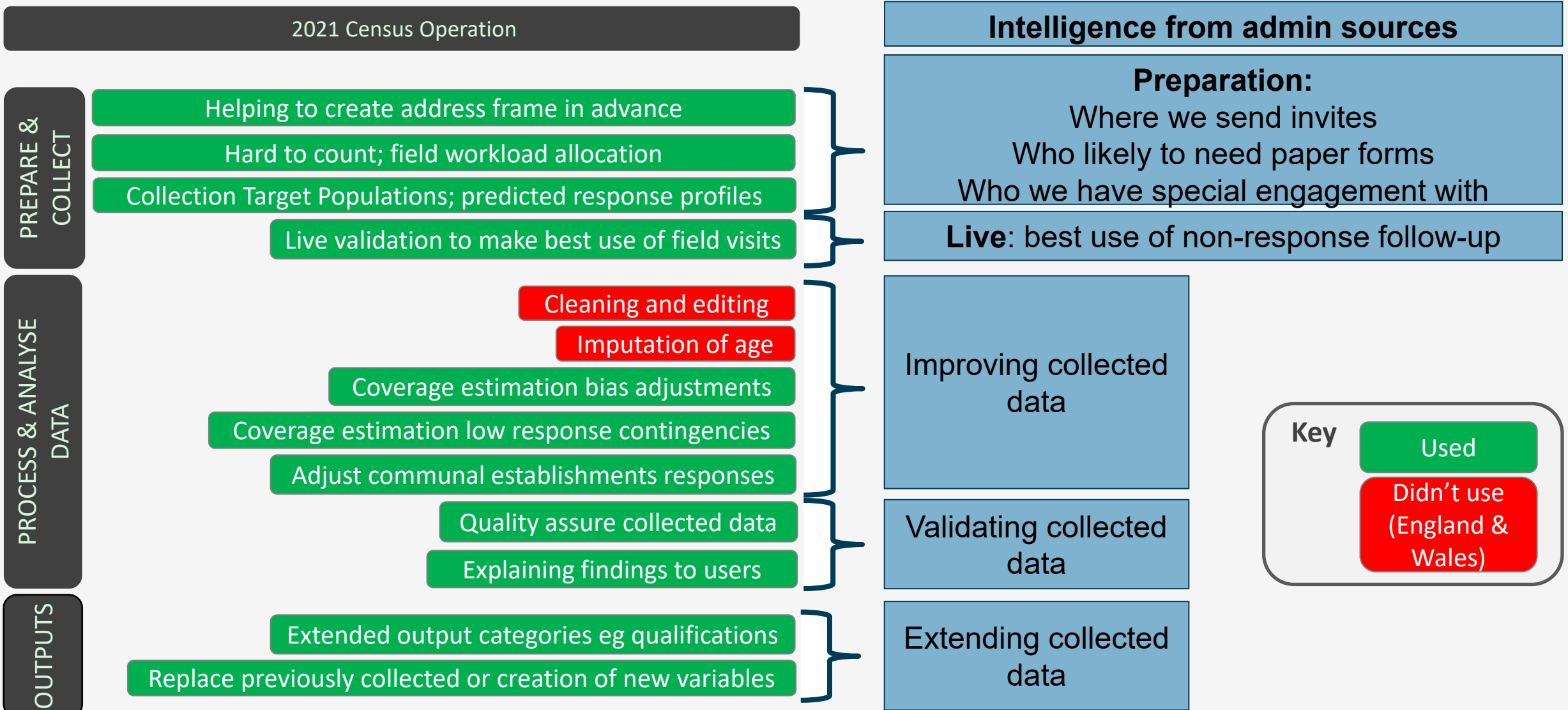
Summary of UK Census designs (1)

- UK: England, Wales, Scotland and Northern Ireland
- 3 separate censuses
 - England and Wales – Office for National Statistics
 - Scotland – National Records of Scotland
 - Northern Ireland – Northern Ireland Statistics and Research Agency
- Harmonised designs, but used administrative data differently
- England, Wales and Northern Ireland: Census March 2021
- Scotland: Census March 2022

Summary of UK Census designs (2)

- Address frame
- Self-response (primarily online, paper available)
- Field follow-up to prompt response (respondents still self-respond)
- Post-enumeration survey to assess coverage and adjust for non-response using a dual system estimation model
- Results published from June 2022 onwards

Potential use of admin data in 2021 Census design



Plans v reality

- Examples of uses in the standard design
 - preparing for collection ✓
 - quality assurance/validation of final estimates ✓ ✓
 - estimating the population in communal establishments ✓
- Preparation to use in contingency situations
 - including scenarios of low response overall ✗
 - in particular areas ✗
 - for certain population groups ✓
- Being prepared to use for other contingencies ✓

Examples of uses of administrative data (1)

- QA showed estimates to be implausible for ages 0-2, in every area
- Used administrative sources to calibrate our dual-system estimation (DSE) model estimates

Births and deaths data,
health data used as
upper limit

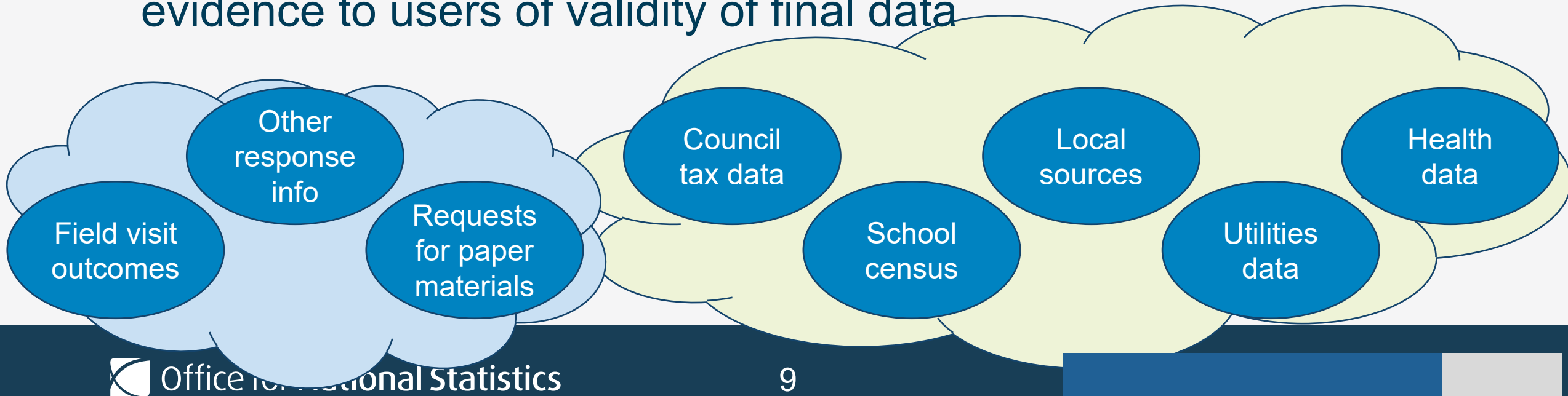
Examples of uses of administrative data (2)

- COVID pandemic impact on Higher Education students studying from home or at education institution
- Guidance given to students to respond for their education institution location, if they still had a contract to live there
- Requested Halls of Residence records on number of students who had contracts to live there
- Used to estimate numbers who should have responded

Halls of Residence
administrative data on
contracts

Examples of uses of admin data (3)

- Alternative Household Estimate (AHE) is an independent calculation of occupied households to check dual system estimation (DSE) assumptions
- Majority of areas were very close to AHE, used as further evidence to users of validity of final data




Learning from Census 2021 (1)

- Be prepared
 - Get data ready in advance
 - Don't underestimate preparation time – requirements, acquisition, engineering, platforms, access
 - Don't underestimate data complexities – georeferencing, matching and linkage
 - Prioritising which sources and aspects of sources are most useful is difficult

Learning from Census 2021 (2)

- Circular use: if use in preparing data, beware how you use it to validate the same data
- The importance of accurate linkage
- Covid impact
- Admin data quality caveats
 - Currency
 - Coherence
 - Addressing and georeferencing



Be prepared:
including
understanding and
explaining
apparent
contradictions in
admin data
indicators

Thank you

Cal Ghee

Office for National Statistics

