

# Using administrative data for social work research

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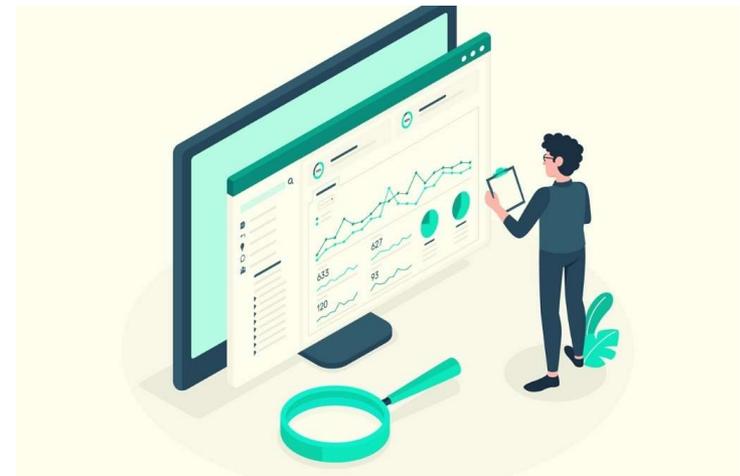
# Aims of the session

Hopefully by the end of this morning you will be able to:

- Understand what is meant by administrative data as well as the difference between aggregated and individual-level data
- Describe some research questions that could be answered using administrative data and the appropriate methods to answer such questions
- Refer to examples of research that have used administrative data to examine aspects of social care provision
- Appraise the advantages and limitations of doing research with this kind of data.

# What is administrative data?

- Information created when people interact with public services, such as schools, the NHS, the courts or the benefits system, and collated by government (ADR-UK, 2021)
- Examples: educational attainment (DfE), tax and incomes (HMRC), hospital records (NHS), National Census (ONS)
- By-product of government services, i.e. not created for research purposes
- May include personal and/or sensitive data



# Benefits of using AD for research

- Resource implications – purpose-built datasets often time-consuming and difficult to complete.
- Access to population-level data – greater statistical power, ability to detect modest but meaningful relationships, detect rare events, and study heterogenous effects
- Feasibility of data linkage, e.g. to Census data about same population
- Real time nature of data – allows topical questions, e.g. effects of recent events / new policies
- Possibility of ‘natural experiments’
- Data quality and comprehensiveness



# Aggregated vs individual AD

## Aggregated data

- Averaged or combined by year, area, organisation, etc.
- Often publicly available
- Not personal or sensitive

## Individual-level data

- Refers to individuals
- Often personal and/or sensitive
- Restrictions around access and use

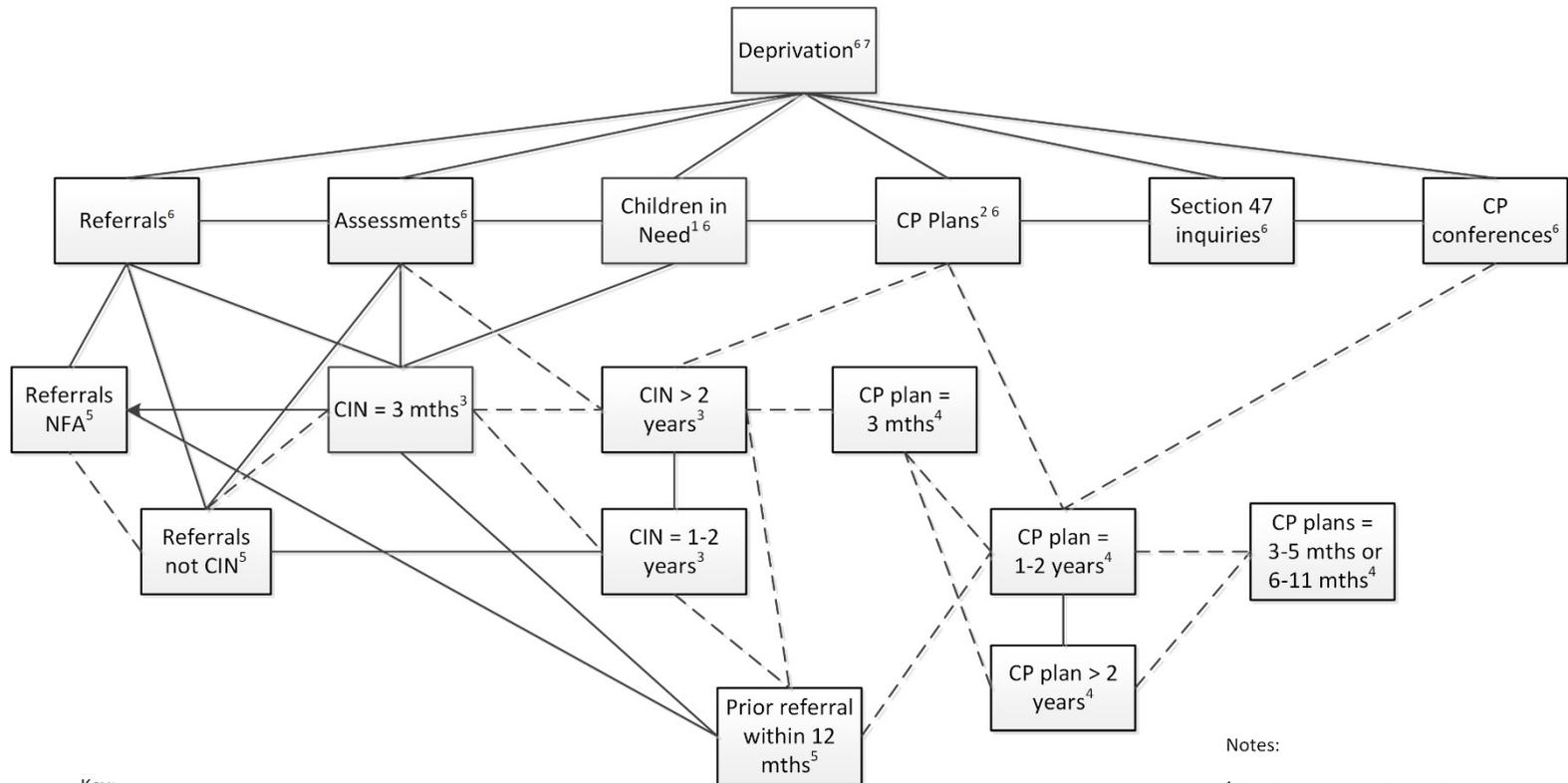


## Questions you could answer with aggregated data

- How many referrals were made to children's social care last year?
- Has demand for children's social care services gone up in recent years?
- Do rates of children in need vary between Local Authorities?
- Is there a relationship between local authority rates of children in care and levels of deprivation?
- Which Local Authorities have seen the biggest cuts to expenditure in children's social care?
- Are changes in expenditure on Early Help associated with subsequent changes in rates of statutory provision?
- What is the impact of an Ofsted inspection on rates of intervention?
- Is it possible to predict a local authority's Ofsted rating using the administrative data?

Explore the data: <https://webb.shinyapps.io/cwip-app-v2/>

# Correlations



Key:

- Positive correlation
- - - Negative correlation

Notes:

- <sup>1</sup> Children in need during the year
- <sup>2</sup> CP plans at 31 March
- <sup>3</sup> Percentage of CIN plans ceased
- <sup>4</sup> Percentage of CP plans ceased
- <sup>5</sup> Percentage of referrals
- <sup>6</sup> Rate per 10,000 LA child population
- <sup>7</sup> Average IMD score

Hood et al., 2019

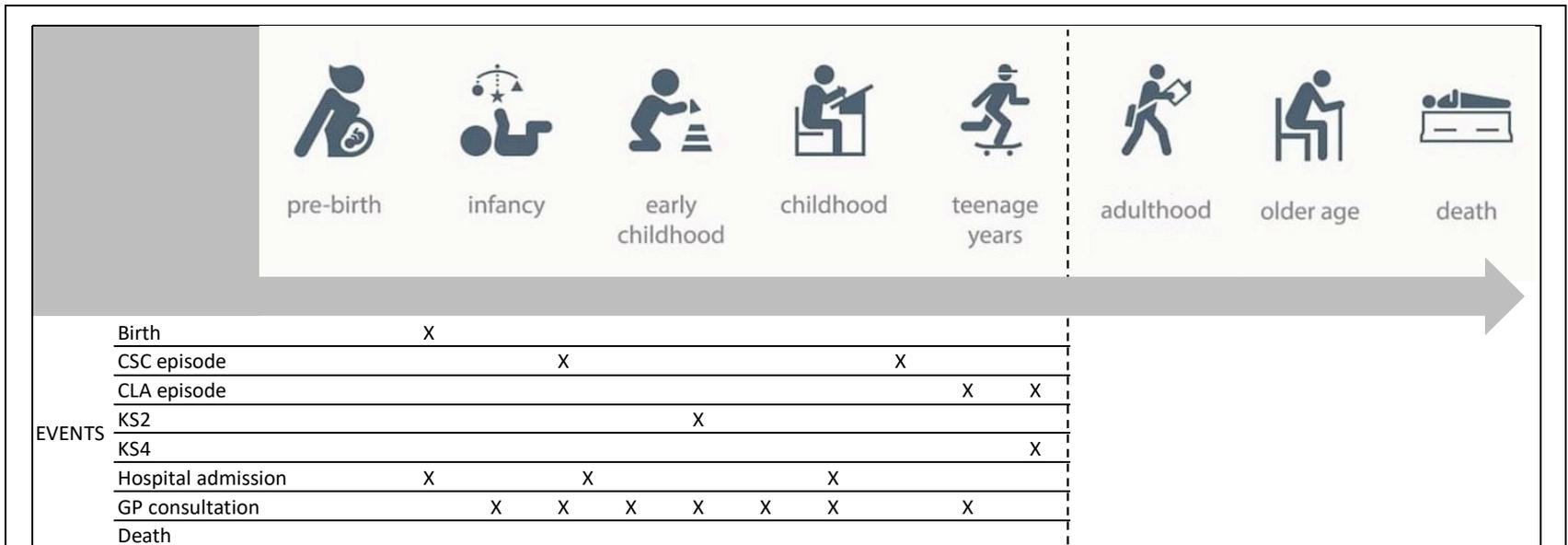
# Limitations of aggregated data

- Difficult to perform subgroup analysis, e.g. whether an intervention works better for some people than for others
- Risk of 'ecological fallacy' – correlations between two variables measured at aggregate level cannot substitute for correlations at the individual level as they are not the same (Robinson, 1950)
- Not possible to do some types of analysis, e.g. not possible to follow individuals longitudinally
- Variation in reporting practices and quality of data

## Questions you would (usually) need individual-level data to answer

- Can we identify and profile the underlying types of demand for CSC services in England?
- How do children's needs evolve over time for those receiving multiple episodes of intervention?
- Which children are more likely to experience a re-referral to children's social care, or re-enter care after they return home?
- What are the gaps in educational attainment of children who receive statutory services compared with those who don't
- Do children who receive statutory services experience poorer health outcomes later in life?

## Event data for individuals



### Children in need census

Intervention pathways (e.g. CIN, S47, CPP)  
Factors at assessment  
CP Plan category of abuse  
Re-referrals / repeat CP Plans  
Sources of referral

### Children looked after returns

Reason for new episode  
Reason for episode cease  
Placement type  
Legal status  
Category of need

### Schools census

KS1  
KS2  
KS4  
SEND  
Free School meals

### Hospital episode statistics (HES)

Diagnosis - 3 characters (DIAG\_3\_NN)  
Method of admission (ADMIMETH)  
Source of admission (ADMISORC)  
Treatment specialty (TRETSPPEF)

### GP clinical records

Diagnosis  
Treatment details

### Office for National Statistics (ONS) mortality data

Causes of death

# Survival analysis

Figure 1: Kaplan-Meier plot showing re-entry to care following reunification

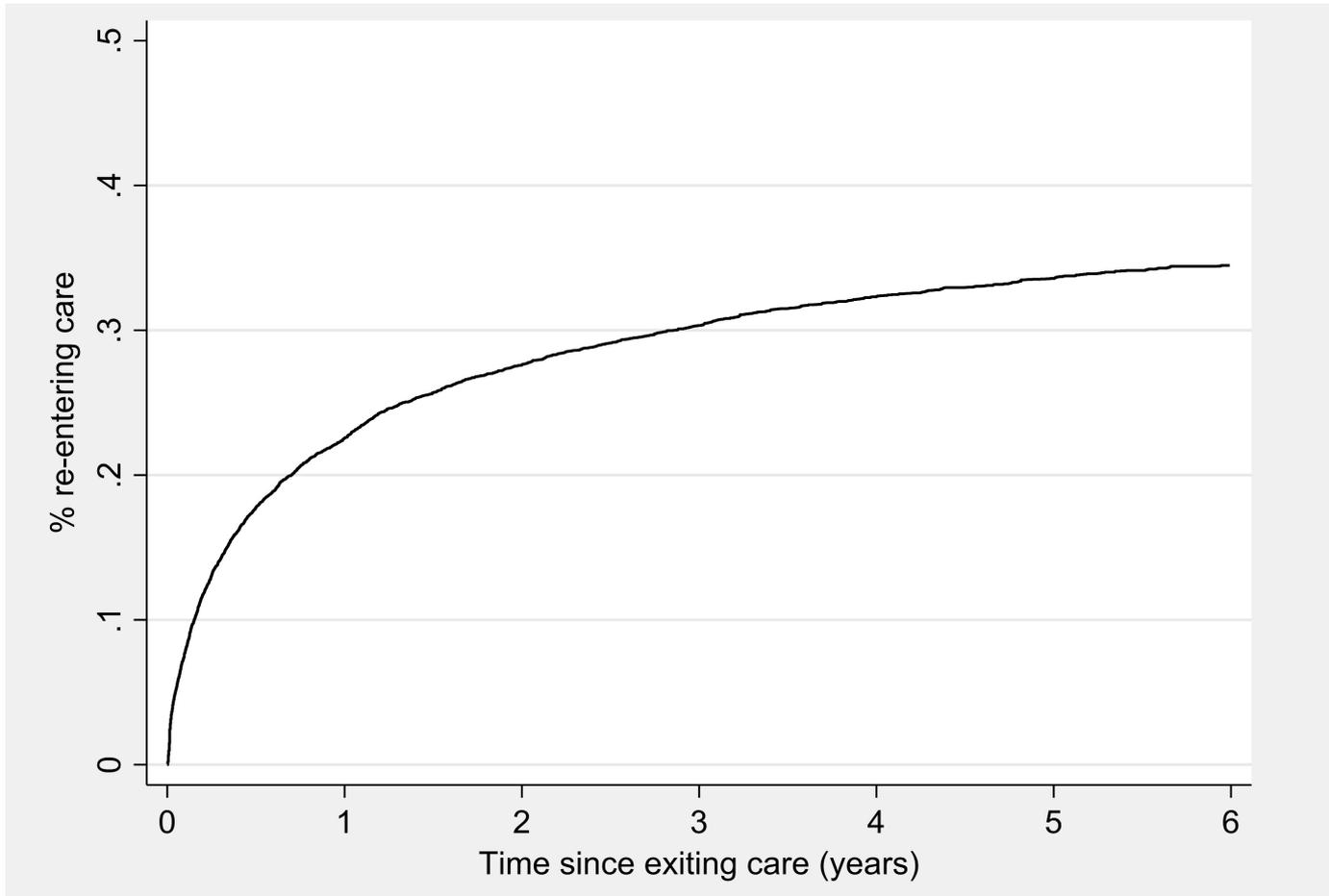
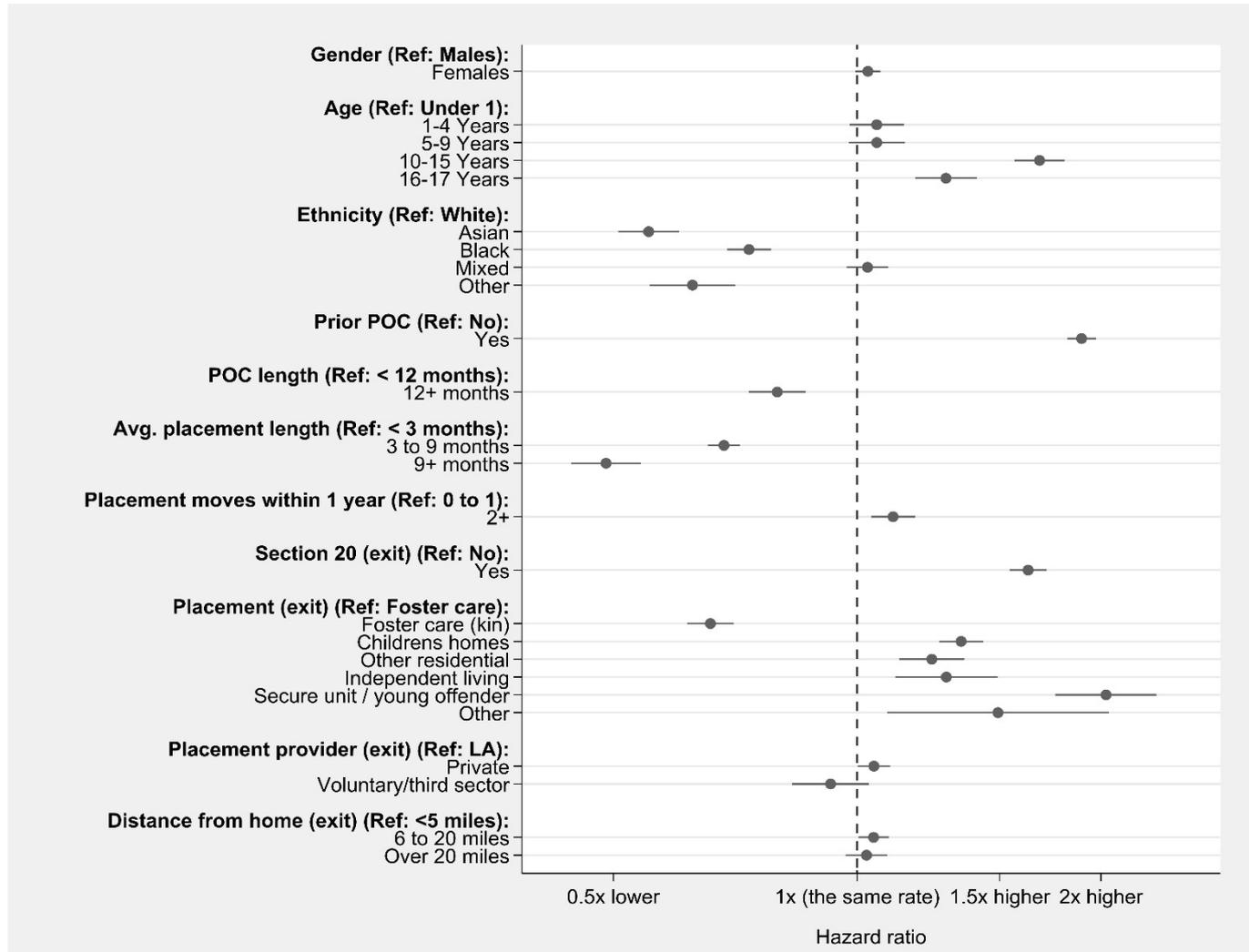


Figure 2: Characteristics of the reunified cohort and factors associated with re-entry to care



## Limitations of using individual-level data

- Access, ethics and data protection
- Statistical disclosure control (SDC)
- Correlations vs explanations
- Population comparisons
- Barriers to data linkage

# To find out more...

## Useful websites:

<https://www.adruk.org/>

<https://www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/approvedresearcherscheme>

<https://saildatabank.com/>

## Projects on children's social care:

<https://www.coventry.ac.uk/research/research-directories/current-projects/2014/child-welfare-inequality-uk/>

<http://www.healthcare.ac.uk/system-conditions-and-inequalities-in-childrens-social-care/>

<https://www.nuffieldfoundation.org/project/outcomes-of-different-types-of-demand-for-childrens-social-care>

## Work by other UK researchers:

Bennett, D.L., Mason, K.E., Schlüter, D.K., Wickham, S., Lai, E.T., Alexiou, A., Barr, B. and Taylor-Robinson, D. (2020) 'Trends in inequalities in Children Looked After in England between 2004 and 2019: a local area ecological analysis', *BMJ open*, **10**(11), p. e041774.

Elliott, M. (2020) 'Child welfare inequalities in a time of rising numbers of children entering out-of-home care', *The British Journal of Social Work*, **50**(2), pp. 581-597.

Webb, C.J.R., Bywaters, P., Elliott, M. and Scourfield, J. (2021) 'Income inequality and child welfare interventions in England and Wales', *Journal of Epidemiology and Community Health*, **75**(3), pp. 251-257.

Wilkins, D. and Antonopoulou, V. (2020) 'Ofsted and children's services: what performance indicators and other factors are associated with better inspection results?', *The British Journal of Social Work*, **50**(3), pp. 850-867

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- Robinson, W.S. (1950) 'Ecological correlations and the behavior of individuals', *American sociological review*, **15**(3), pp. 351-357.