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CYP Now conference

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@TheIFS

Evaluation for impact

Economic and Social Research Council

Can early years programmes work?

"**So much in life depends on those crucial early years**: before school, when the gaps between rich and poor open up. It is my first priority; the life chances of our children, and the future of our country demand nothing less."

- *Bridget Phillipson MP*

"**The building blocks for lifelong emotional and physical health** are laid down in the period from conception to the age of two."

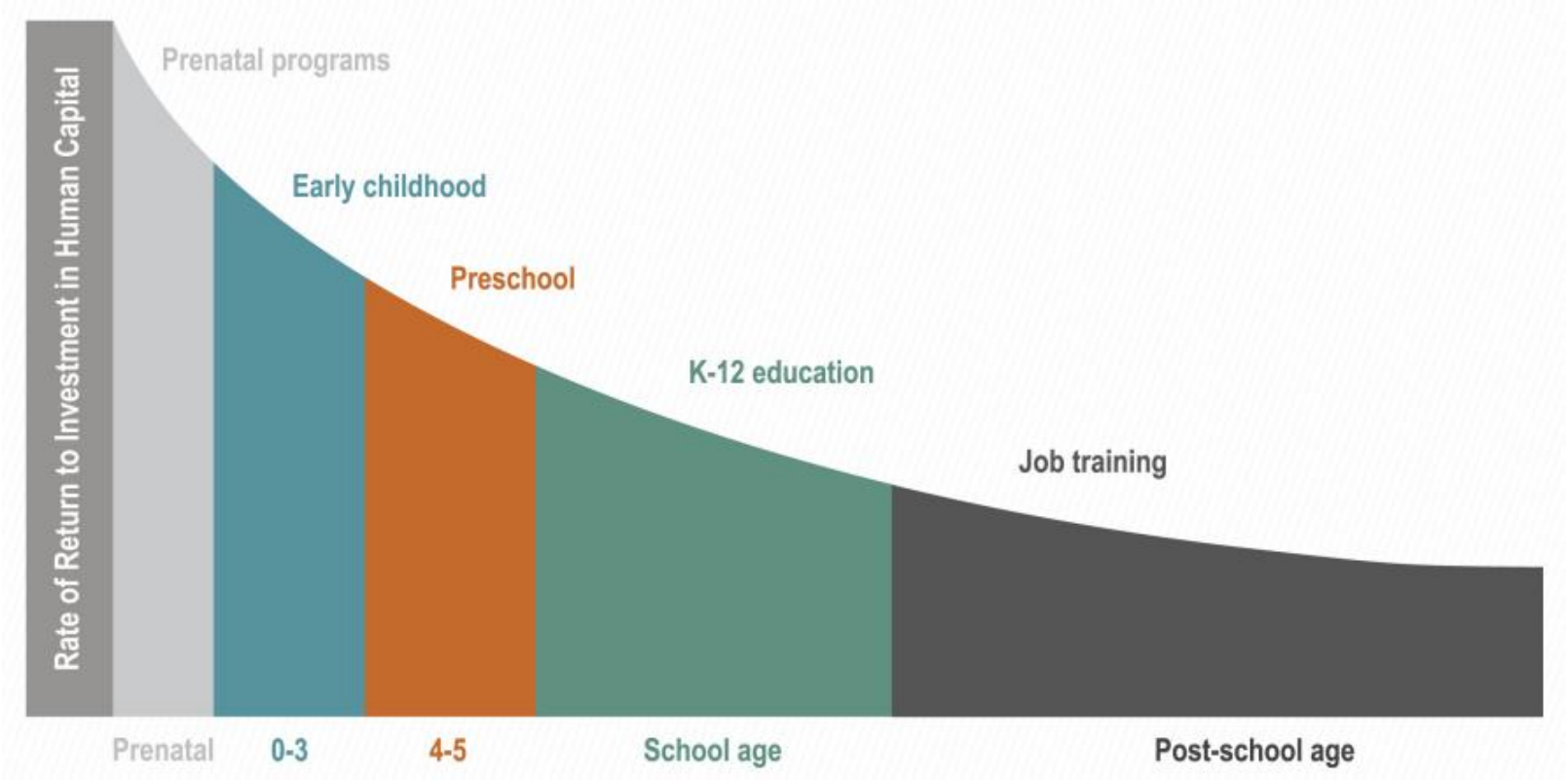
– *Dame Andrea Leadsom*

Welcome to
MICHIGAN
tea
desser

The ‘best case’ scenario

Robust evidence suggests that early years programmes *can* be hugely effective in supporting children

- And can even save money for government

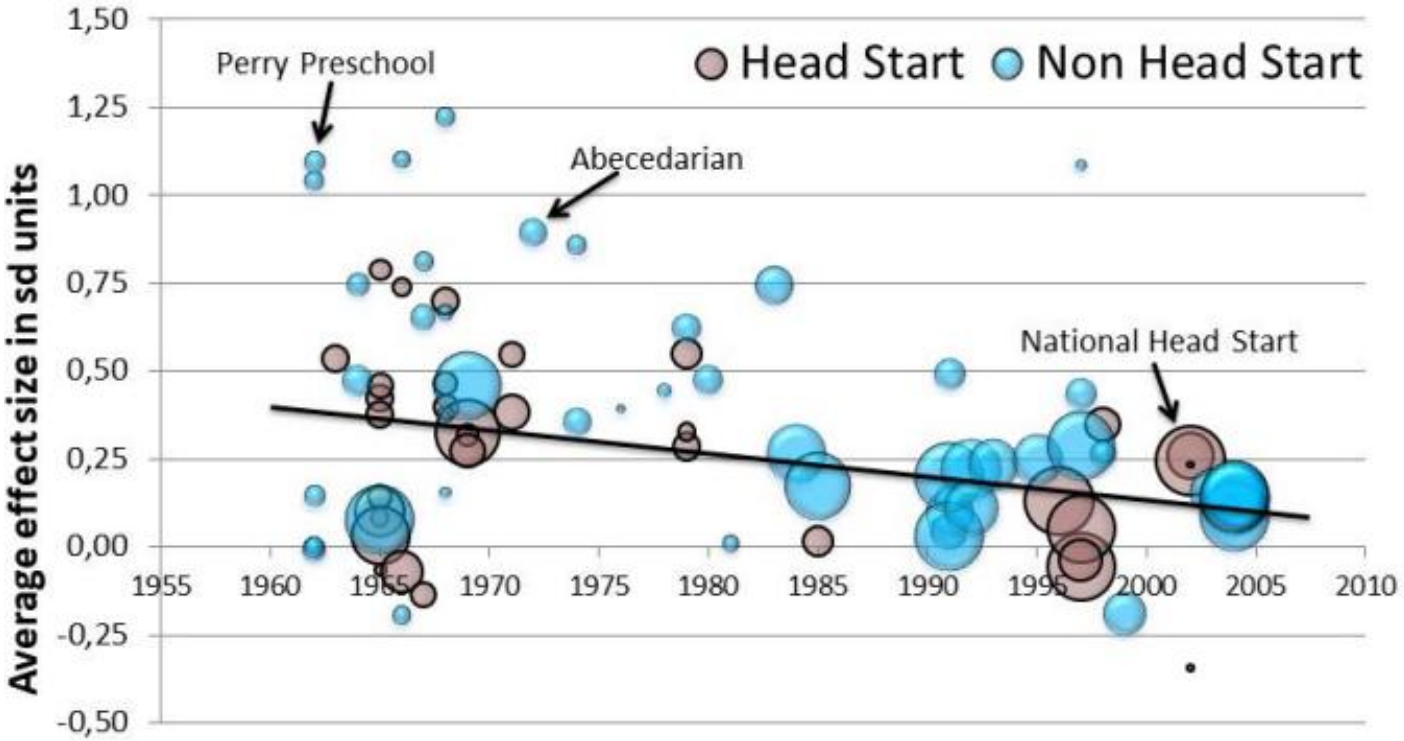


Source: “The Heckman Curve”, the Heckman Equation website.

But ‘best case’ is exactly that

So early years interventions *can* deliver some of the strongest public returns…

- … But often don’t live up to their full potential



Source: Figure 1, Duncan et al. (2022). Bubble sizes are proportionate to the inverse of the squared standard error of each estimate. Figure contains estimates from 84 studies of early education programmes, predominantly in the U.S. (full list available here).

Enter evaluation

This makes evaluation **incredibly important**

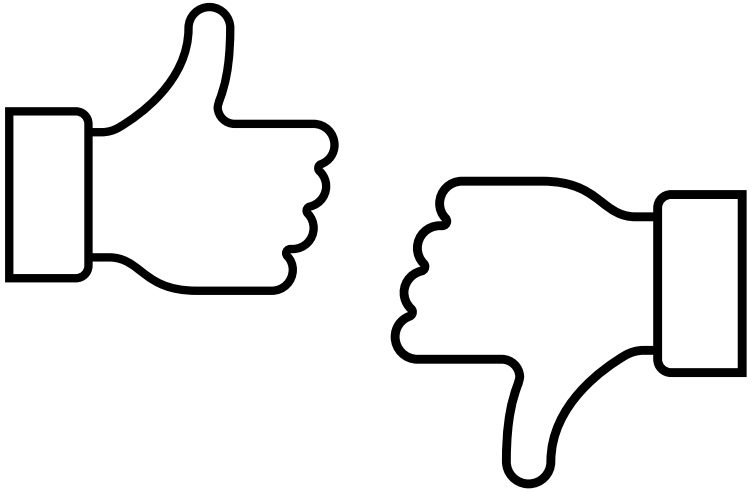
- For ***practical*** insights: What is working well…
  - For whom? In what way?
  - And what can we do less of?

- For ***policymaking***: Deciding where to allocate resources
  - Evidence is the route to influence

How can we know what we’re achieving?

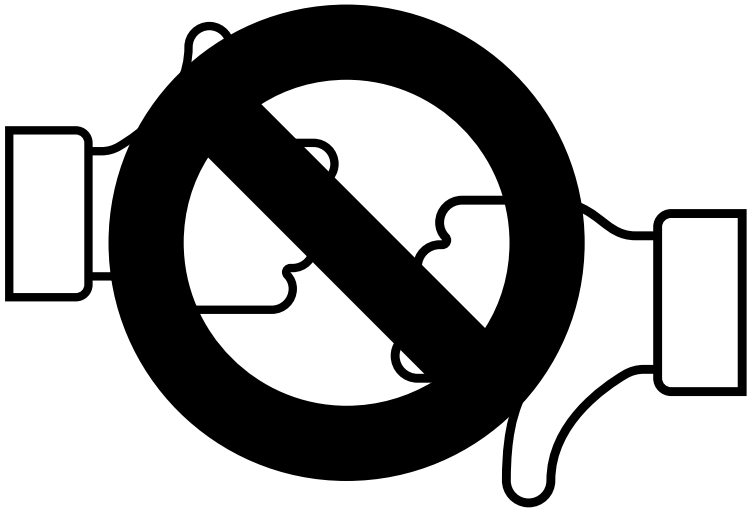
The evaluation problem

- ‘Does this programme work?’



The evaluation problem

- ~~'Does this programme work?'~~



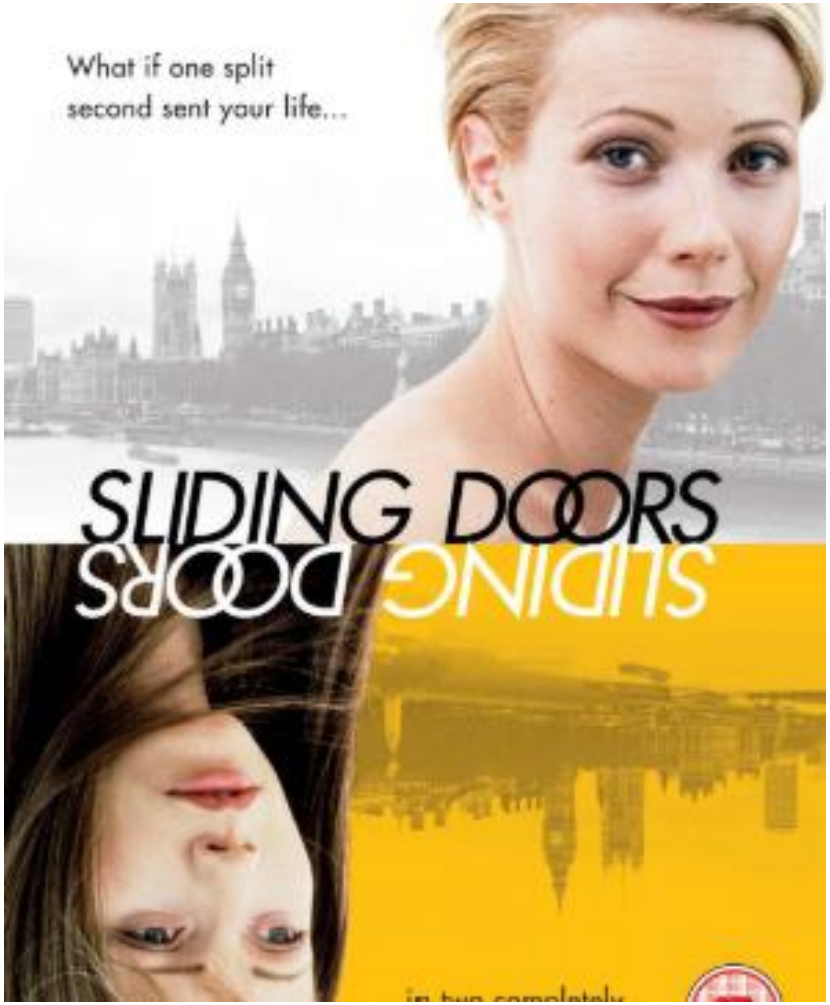
The evaluation problem

- ~~'Does this programme work?'~~
- This is **always** a relative question:
  - 'Does this programme work better than existing programmes?'
  - 'Does this programme work better than doing nothing at all?'

- Which means we always need to ask:

"What **would have happened** to children/parents/society without the programme?"

An ideal evaluation



Ideal scenario for an evaluation:

- One well-defined intervention
- Exactly the same person both:
  - Treated (catches the train)
  - Not treated (misses the train)

Since the two people are otherwise identical, we know that **all the differences in their outcomes are down to that moment**

Sadly not a typical scenario…

- Outside of some (excellent) films, we don't get to see both versions of a person's life.
- So we will never know what happened in this 'counterfactual world'!

- The best we can do is predict what would have happened
  - Using data on what happened in the past and what is happening to other 'similar' groups

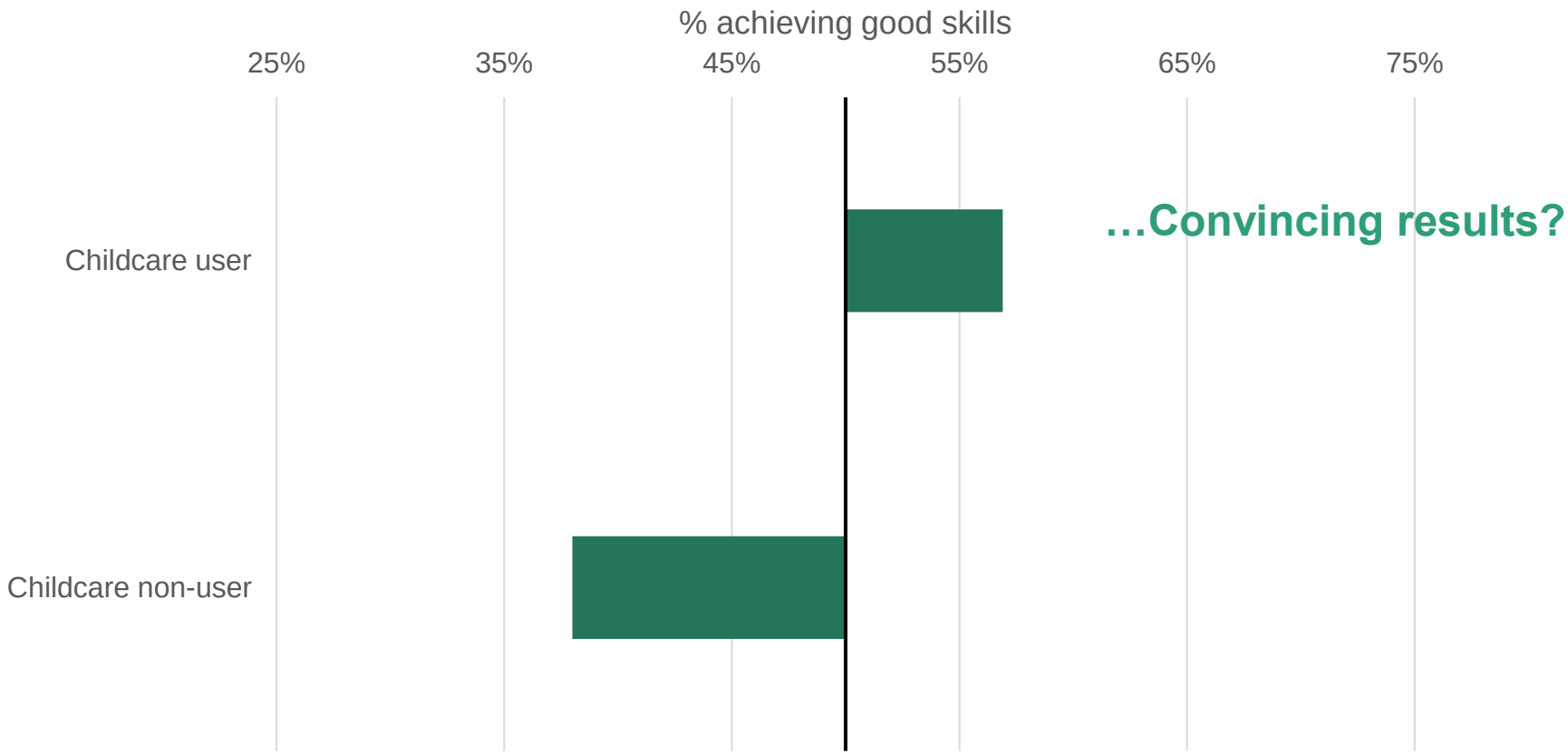
An example

Question: Does using childcare support children's development?

Strategy #1: Compare the outcomes of children using childcare against those who don't

Headline: More Childcare Makes Children Smarter!

% achieving good cognitive skills at age 3, by childcare use



Source: Authors' calculations using data from the Millennium Cohort Study. 'Good skills' are defined by being above the median on composite measures of cognitive or socio-emotional skill at age 3.

An example

Question: Does using childcare support children's development?

Strategy #1: Compare the outcomes of children using childcare against those who don't

Problems?

- Families choosing to use childcare might be quite different from those who don't
  - e.g. Working patterns, where they live, the importance attached to childcare, cultural values, parents' preferences and abilities, ….
- Families choose the best arrangements they can for their child
  - They might choose to keep children who are struggling more at home
  - Or choose to send a child struggling to socialise into nursery!

An example

Question: Does using childcare support children's development?

~~**Strategy #1:** Compare the outcomes of children using childcare against those who don't~~

Strategy #2: Compare children's outcomes before and after they start childcare

An example

Question: Does using childcare support children's development?

~~**Strategy #1:** Compare the outcomes of children using childcare against those who don't~~

Strategy #2: Compare children's outcomes before and after they start childcare

Problems?

- Kids develop anyway as they get older!

We need a strategy…

- It's really easy to do a bad evaluation
  - And these can be worse than unhelpful – they can actively mislead
- Good impact evaluation is all about the counterfactual
  - So we need to find ways to overcome the evaluation problem…
  - Determine a reasonable counterfactual…
  - And derive credible causal estimates

This comes down to a question:

What is our best estimate of what this child's outcomes would have been, if we hadn't introduced the free entitlement?

The good news

- There are lots of options here!

1. Randomise!
   - Recruit lots of people – everyone has their own characteristics
   - **Randomly** allocate them to ‘treatment’ or ‘comparison’
   - **On average**, these two groups will have similar characteristics
   - The only difference will be the treatment
   - So any difference in outcomes is down to treatment!

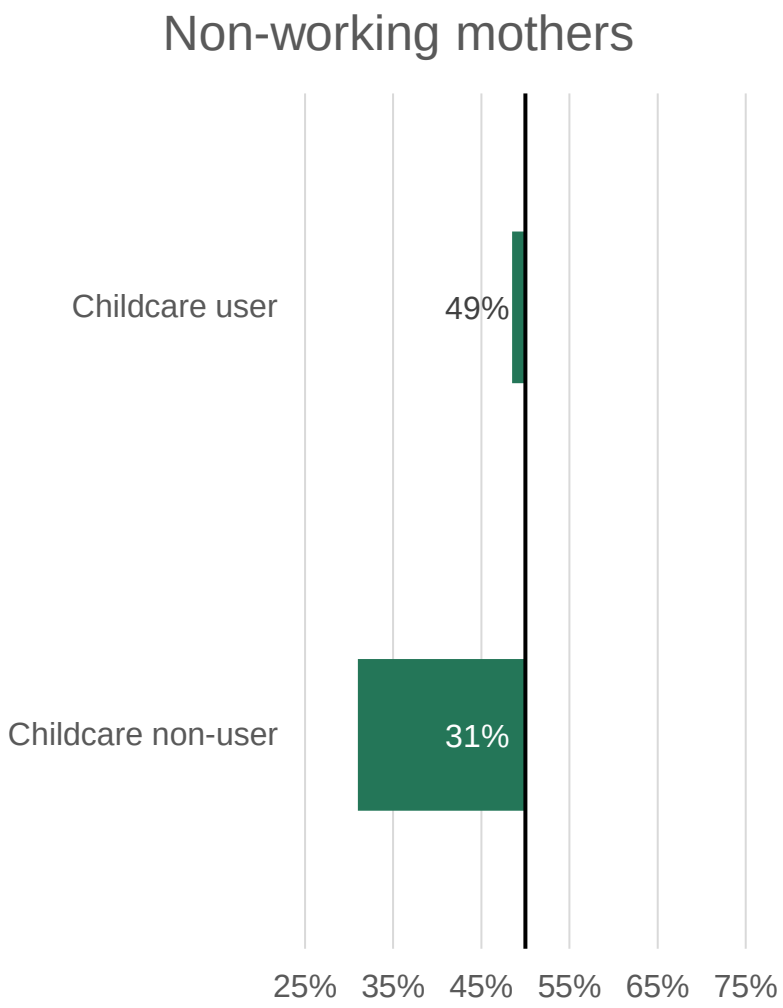
- But randomising isn’t always an option
  - Practical, political and ethical considerations
  - Tension between ‘building the evidence base’ and ‘delivering for all’
  - Challenging (though not impossible) to experiment on programmes that have already been rolled out

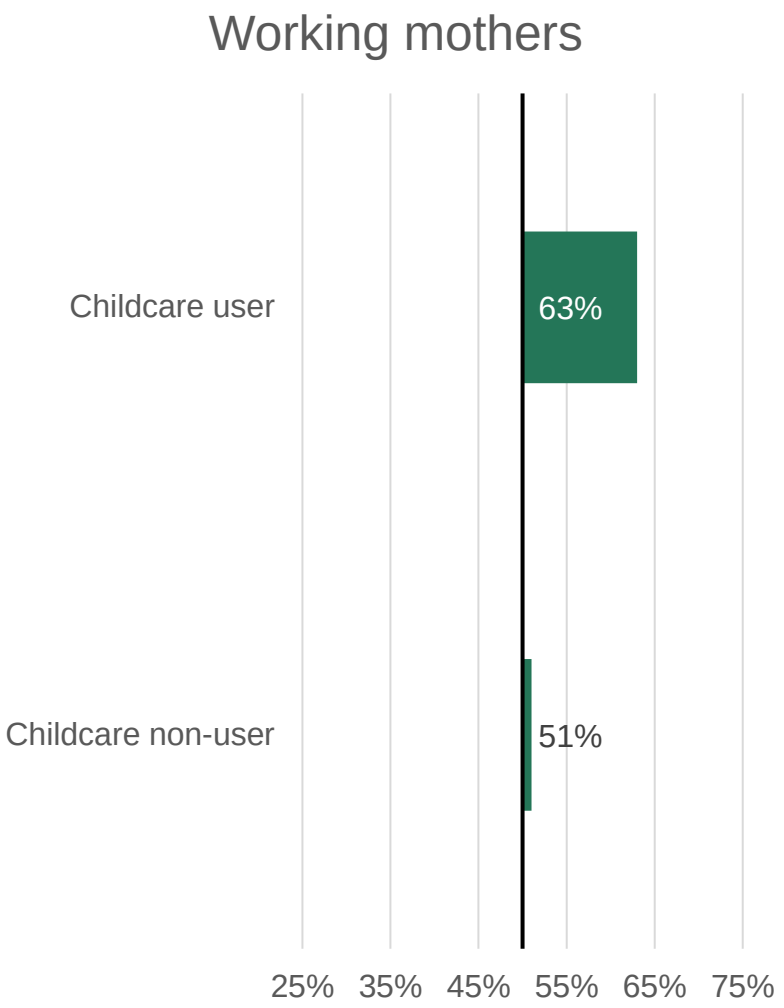
The good news

- There are lots of options here!

1. Randomise!
2. Pick people who look at similar as possible, based on what you can see about them

Childcare and cognitive skills





The good news

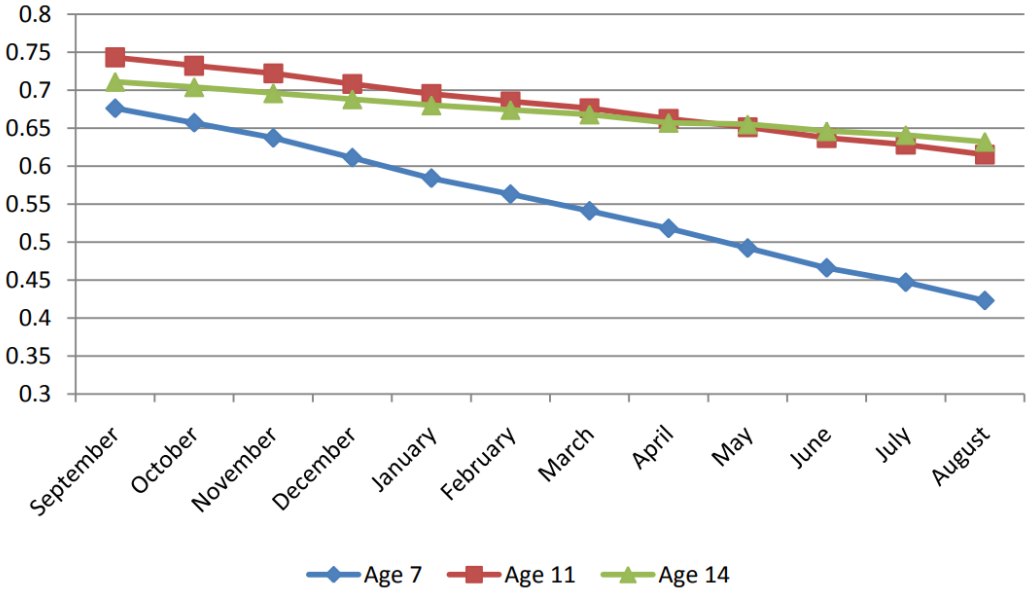
- There are lots of options here!

1. Randomise!
2. Pick people who look at similar as possible, based on what you can see about them
3. Look for reasons why some people are treated and others aren't

Date of birth cut-offs

- Children born just one day apart can have very different entitlements
- 31 August = start school at 4 years and a day
- 1 September = start school at age 5

Share of children meeting 'expected level of development', by month of birth



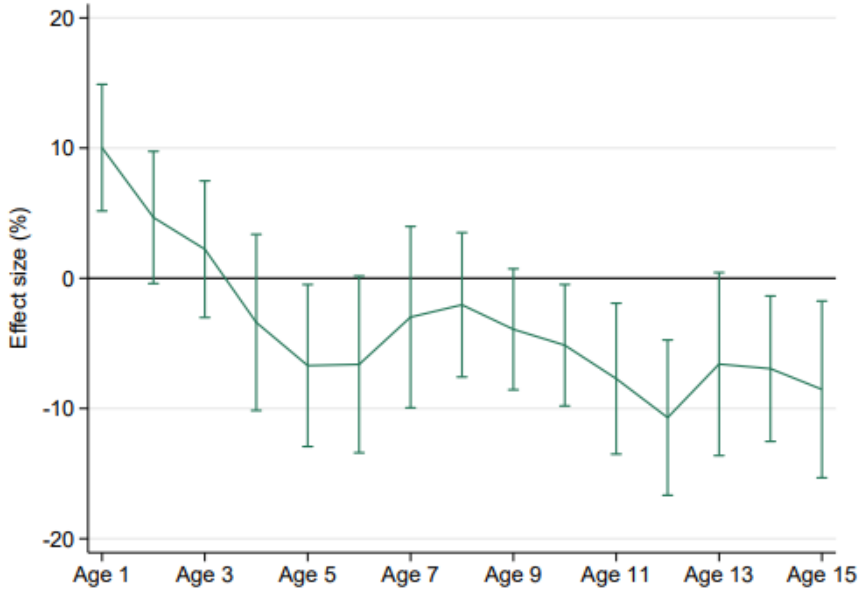
Source: Figure B2, Crawford, Dearden and Meghir (2010).

Rollout across time and space

- Programmes are often rolled out over time – so different neighbourhoods get access at different times
- If we understand *why* this rollout happened, we can use not-yet-treated neighbourhoods as counterfactuals

- Accounting for:
- Fixed neighbourhood differences
- National time trends

Effect of an increase in Sure Start coverage on probability of hospitalisation



Source: Figure 3, Cattan et al. (2022).

What does this mean for practitioners?

1. **Evaluation *matters*:** It helps all of us do better for children and young people
2. **Evaluation is always *relative*:** Does this work *compared to something else*?
3. **Evaluation comes down to the *counterfactual*:** How close can you get to Sliding Doors?
4. **Evaluation needs *context*:** Good evaluation often hinges on knowing not just who got what treatment…
   - But also where it was delivered, when it started, how it was rolled out, why those children were treated and not these others

What does this mean for practitioners?

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- England has some of the best infrastructure for evaluation in the world
- And committed practitioners, commissioners, researchers make that community continue to work in the best interests of children