The impacts of Local Authority Universal Free School Meal schemes

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Nuffield Foundation

MiSoC ESRC Research Centre on Micro-Social Change

University of Essex

UKRI Economic and Social Research Council

ISER Institute for Social & Economic Research

Background

- Child overweight and obesity is a serious and growing worldwide public health problem. In England in 2020/21:
  - 27.7 % children overweight or obese at age 4/5 [up from 23.0 in 2019/20]
  - 40.9% aged 10/11 overweight or obese [up from 25.2 in 2019/20]

- Slow earnings and employment growth, high inflation, restrictive eligibility and generosity of benefits = Cost of living crisis
  - Affects households' ability to provide what children need to learn and grow healthily.

Background

- Children consume a large fraction (~1/3) of their food energy during school hours. So school meal provision potentially an obvious policy lever to:
  - Increase rates of healthy weight among children
  - Help households with the cost of living
  - Improve educational attainment

School food policy (England)

- Universal **Infant** Free School Meal (UIFSM) Policy introduced from Sep 2014
  - All Reception, Year 1, Year 2 entitled to free school lunch every day in term-time.
  - Funded by Department for Education. Proposed to be cut for 2020 Spending Review, but not implemented.
  - Politically live: Removing, retaining, extending UIFSM by age, or extending means-tested entitlement to higher income groups are all possible nationally within next electoral cycle.

- Means-tested Free School Meals for school years 3+
  - Free School Meal (FSM) available to eligible pupils whose parents receive Universal Credit and have <£7400 annual household earnings.
  - Child Poverty Action Group estimates that 800,000 children living in poverty do not qualify.

- All other children can purchase same meal at cost (about £2.40) or bring a packed lunch

School food policy (England)

- Since 2008: School Food Standards, meaning high nutritional standards and limits on portion sizes.
  - Budget for (UI)FSM has not increased in line with inflation – quality may be squeezed.
  - But definitely more nutritious, appropriate, than packed lunches on average. (Parnham et al 2022a, 2022b, Evans et al., 2020)

LA UFSM schemes

Duration of continuous exposure to UFSM at end of Year 6

Year-ending:	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England													
Newham													
Islington													
Southwark													
Tower Hamlets													
Key													
Year 6 students currently receiving UFSM and have received for													
						1	2	3	4	5	6	7	years
Year 6 students previously received UIFSM													
						<1	1	2	3	4	5	6	years ago

- This project: Evidence of impacts in four Local Authorities who provided Universal Free School Meals throughout primary school, independently, or part of a government pilot.

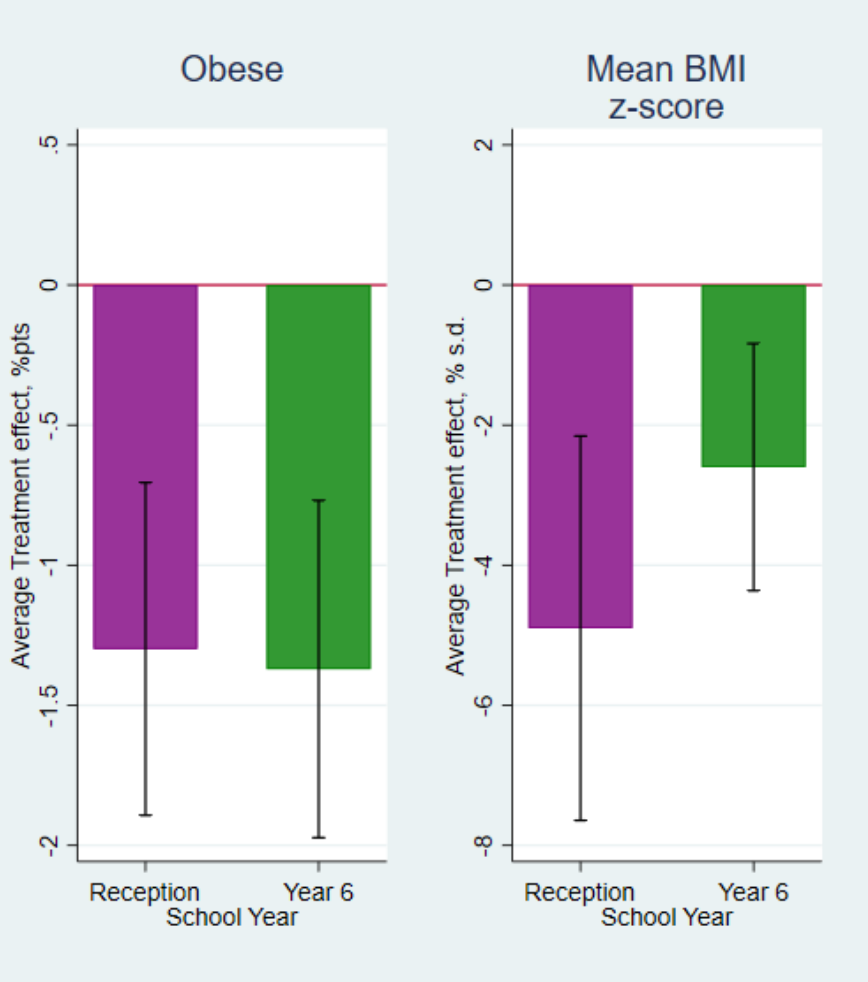
Methods

- Based on **difference-in-difference methods.**
  - Key assumption: Change in outcomes in ‘never-treated’ Local Authorities is a good **guide to what would have happened** in ‘treated’ Local Authorities, if UFSM had never been introduced.
    - **“Parallel trends”**

Bodyweight outcomes: Data

- **Bodyweight outcomes:** National Child Measurement Programme (school-level).
  - From annual nurse visits to schools to measure Reception and Year 6 children.
  - Provided by NHS Digital
  - ‘Small number suppressed dataset’ with a limited control variable set.
    - Timing of measurement, prop. Black ethnicity and girls, quintiles of school FSM registration and deprivation.

Impacts on bodyweights



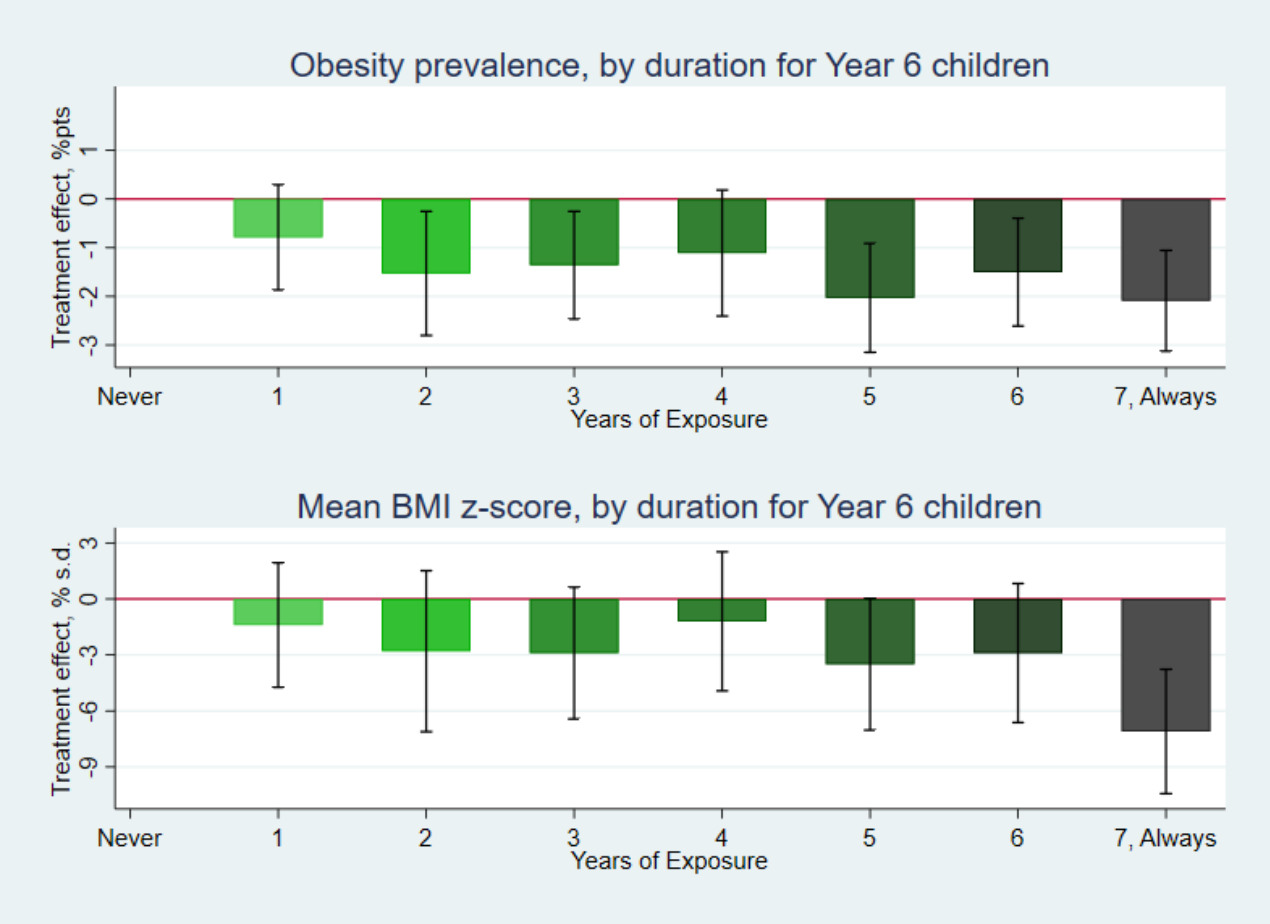
UFSM makes children's bodyweights healthier:

- Reduces obesity prevalence by 1.3 percentage points in both Reception and Year 6.
- Reduces average BMI, larger impact in Reception.

This is despite all those Reception children receiving UFSM for less than a year, compared with up to 7 years.

Note: Source: National Child Measurement Programme, Borusyak, Jaravel & Spiess imputation method applied separately to each distinct population. Reception analysis excludes academic years-ending 2015 onwards due to national UIFSM. Capped bars indicate 95% confidence intervals. N = 76,283 Reception school-years in underlying regression, 679 treated school-years. N= 113,587 Year 7 school-years in underlying regression, N=1695 treated school-years.

Impacts on bodyweights by duration



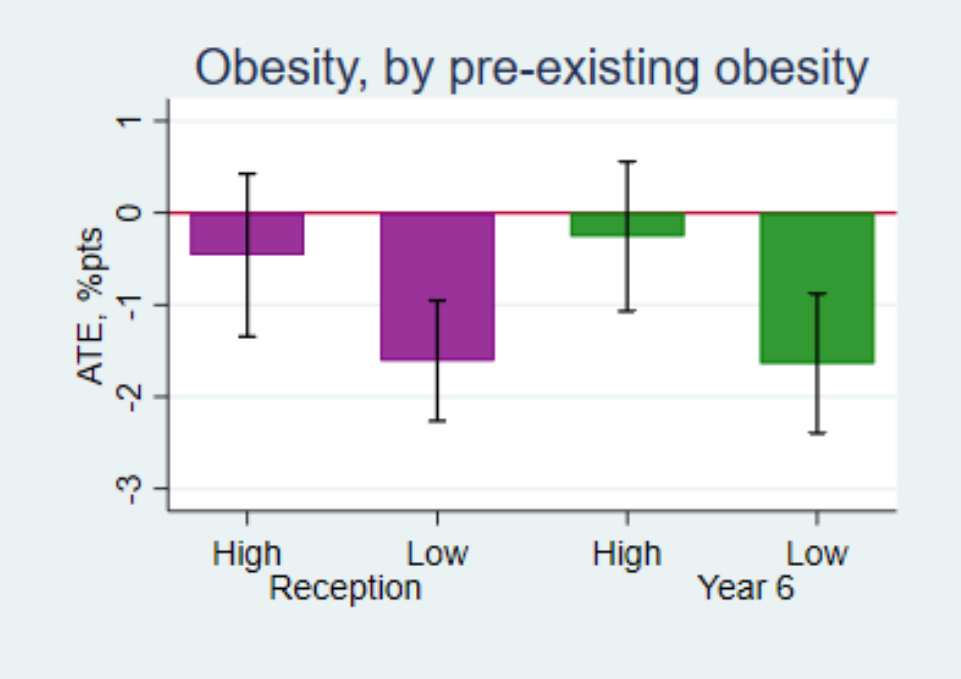
- Very little impact on those receiving UFSM for the first time in Year 6:
  - Bodyweights of Year 6 children are much harder to shift in a short time period than Reception children.
- Largest effect is for Year 6 children always exposed to UFSM

So: Best if provided from the beginning, throughout primary school

Note: Source: National Child Measurement Programme. Pooled school-and-year fixed-effect regression with separate treatment indicators for each duration of exposure. Capped bars indicate 95% confidence intervals. N = 115,325 (obesity) and 115,444 (BMI z-score)school-years

Impacts on bodyweights by school characteristics

Above treatment-area median obesity in 2007-2009 v. below median.



Effects smaller in schools with high pre-existing obesity

- More difficult environment (re. exercise, housing, food availability) makes bodyweights harder to shift?

Note: Source: National Child Measurement Programme, Borusyak, Jaravel & Spiess imputation method applied separately to each distinct population. Reception analysis excludes academic years-ending 2015 onwards due to national UIFSM. Populations: Reception: High obesity, 15,516 underlying, 342 treated. Low obesity, 59235 underlying, 333 treated. High obesity, 15,686 underlying, 826 treated. Low obesity, 92,933 underlying, 869 treated.

Cost of living: Data

- **Household food expenditure:** *Understanding Society*, household-level survey data on families with at least one child aged 0-15.
- Outcome variables are:
- Real (February 2020 prices) monthly household expenditure on:
  - **Supermarket shopping** [which includes non-food essentials]
  - **Eating out** [which includes meals purchased at work and school]
  - **Total of the above.**

Impacts on household food expenditure

- Real (February 2020) spending in the last four weeks:

	Supermarket food	Eating out	Total
N UFSM-eligible children	-10.12	-9.14*	-18.76**
	(6.33)	(5.02)	(9.09)
N observations	46764	46767	46581
Sample mean	396.21	104.83	497.70
Sample s.d.	(238.39)	(116.92)	(289.51)

- Similar effects on supermarket bills and eating out - proportionally larger for eating out.
- UFSM is worth £34.50 per child per 4wks on average.
- UFSM crowds out spending of approximately one-half of this value, on average.
- Incomplete crowd-out means households are consuming a higher value of food in total.
- So the policy **does help households with the cost of living.**

Breaking down effect on food spending

- These results are an average across four types of household:

- Those already FSM-eligible and taking a school meal. **[approx. 15% of population]**

- Those previously taking a packed lunch, who keep doing so. **[15% of population]**

- Households previously paying for a school meal, who now receive one for free. **[26% of population]**

- Previously taking a packed lunch, who switch. [**44% of population**]

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Expect no impact on expenditure for these households

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Money back in these households' pockets.

Reduction in 'eating out' spending is consistent with this group saving all of the 'school dinner money' to spend on things other than eating out.

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Money back in these households' pockets.

Reduction in 'supermarket food' spending would be consistent with this group previously spending £1.41 per child per day on assembling packed lunches.

Or, previously spending more than this on packed lunches, but now increasing spending on other food items.

Either way, implies an increase in total value (quality?) of these households' food intake

Cost benefit analysis

- Universal FSM would cost an extra £2350 per schoolchild on average, to provide throughout primary school.

- *But* Universal FSM is **an investment in the future health and productivity of the country.**
  - The reduction in obesity prevalence will benefit the NHS and the economy for as long as it persists.
  - Even *delaying* the onset of obesity reduces risk of some health conditions, and predicts increased educational attainment at age 16.

- Discounting future benefits *from reduced obesity only* by 3% per year, the benefits and costs of policy approximately break-even.
  - Discounting the future by any less, it more than pays for itself.

Cost benefit analysis

Additional benefits:

- The cost of living support will also improve the welfare of parents and the rest of the household.
  - Which is difficult to place an economic value on.
- **Work in progress:** Improvement in educational attainment at age 11, also predicts an increase in earnings over entire working life.
- **Work in progress:** Reduction in school absences means fewer parental days of work missed.
  - Which we will place an economic value on and include in our cost-benefit analysis.

Conclusion

- Extending universal FSM entitlement to all primary school children would be a well-targeted measure to help households with school-age-children with the cost of living now.
- It would more than pay for itself in the long-term through reduced NHS spending and increased productivity now and in the future.

- More results and methodology in our Explainer:
  - https://doi.org/10.5526/misoc-2022-003
- Final report, including impacts on educational performance, absences and take-up/registration of FSM, to be launched in May 2023.

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The paper uses data from the National Child Measurement Programme, supplied by NHS Digital, also known as the Health and Social Care Information Centre.

It also uses data from the Department for Education's National Pupil Database, provided through the ONS Secure Research Service.

The use of the ONS or NHS Digital statistical data in this work does not imply the endorsement or quality assurance of the ONS or NHS Digital in relation to the interpretation or analysis of the statistical data. Research datasets may not exactly reproduce National Statistics aggregates.

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