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## Short Communication

## Half of children entitled to free school meals did not have access to the scheme during COVID-19 lockdown in the UK

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## ABSTRACT

**Objectives:** The objectives of the study were to investigate access to free school meals (FSMs) among eligible children, to describe factors associated with uptake and to investigate whether receiving FSMs was associated with measures of food insecurity in the UK using the Coronavirus (COVID-19) wave of the UK Household Longitudinal Study.

**Study design:** The study design was cross-sectional analyses of questionnaire data collected in April 2020.

**Methods:** Six hundred and thirty-five children who were FSM eligible with complete data were included in the analytic sample. Accessing a FSM was defined as receiving a FSM voucher or a cooked meal at school. Multivariable logistic regression was used to investigate (i) associations between characteristics and access to FSMs and (ii) associations between access to FSMs and household food insecurity measures. All analyses accounted for survey design and sample weights to ensure representativeness.

**Results:** Fifty-one percent of eligible children accessed a FSM. Children in junior schools or above (aged 8+ years) (adjusted odds ratio [AOR]: 11.81; 95% confidence interval [CI]: 5.54, 25.19), who belonged to low-income families (AOR: 4.81; 95% CI: 2.10, 11.03) or still attending schools (AOR: 5.87; 95% CI: 1.70, 20.25) were more likely to receive FSMs. Children in Wales were less likely to access FSMs than those in England (AOR: 0.11; 95% CI: 0.03, 0.43). Receiving a FSM was associated with increased odds of recently using a food bank but not reporting feeling hungry.

**Conclusions:** In the month after the COVID-19 lockdown, 49% of eligible children did not receive any form of FSMs. The present analyses highlight that the voucher scheme did not adequately serve children who could not attend school during the lockdown. Moreover, more needs to be done to support families relying on income-related benefits, who still report needing to access a food bank. As the scheme may be continued in summer or in a potential second wave, large improvements will be needed to improve its reach.

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## Introduction

In the UK, 10% of children experience severe food insecurity with research suggesting that levels have risen during the Coronavirus (COVID-19) pandemic.<sup>1,2</sup> As food insecurity is associated with a wide range of negative health outcomes, including increased hospitalisations, asthma and poor mental health,<sup>3</sup> it is critical that food insecurity prevalence does not increase. Free school meals (FSMs) are a key public health policy in reducing food insecurity and dietary inequalities in children in the UK. Currently there are two FSM

schemes in the UK. Under the means-tested scheme, children in a household receiving income-related benefits are eligible for a FSM. As of 2014, however, a universal FSM scheme was introduced, in which all infant school children (aged 4–7 years) are eligible for a free meal, regardless of income. Research has shown that school meals play an important role in levelling inequalities in dietary intake, with the most deprived children having the most to gain from eating a school lunch.<sup>4,5</sup> Moreover, school lunches have been shown to be healthier than packed lunches regardless of the income level.<sup>6</sup> As such, the universal infant FSM scheme has been associated with reduced obesity rates in reception children (aged 4–5 years).<sup>7</sup>

On 20th March 2020, all UK schools closed until further notice due to COVID-19, except to vulnerable children and children of key

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workers. Consequently, the 1.3 million children who claim FSMs in England were unable to access their entitlement unless they were eligible to attend a ‘skeleton’ school (were vulnerable or a child of a key worker).<sup>8</sup> Vouchers worth £15 per week were introduced from 31st March to ensure FSM-eligible children had continued access to lunch outside of school. Schools had the responsibility of applying for and distributing electronic voucher codes to their FSM-eligible pupils. However, each of the devolved nations took different approaches to FSM provision during lockdown including providing electronic vouchers (England), direct bank transfers (Northern Ireland, Scotland and Wales) and food parcels (Wales and England).<sup>9</sup> The scheme was only made available to children on the means-tested FSM scheme, not the universal infant FSM scheme.

Since implementation, there have been reports that some beneficiaries were not able to access FSMs.<sup>2</sup> In a time of sudden economic change, which affected those on low incomes the worst,<sup>10</sup> it is essential that the government ensured continuity of the FSM scheme in the COVID-19 lockdown. Optimal implementation of the scheme will be needed to support children belonging to low-income families and prevent a widening of health inequalities.

## Objectives

We investigated access to FSMs among eligible school children in the UK using the COVID-19 wave of the UK Household Longitudinal Survey (UKHLS). In addition, we described factors associated with uptake and investigated whether receiving FSMs was associated with measures of food insecurity.

## Methods

UKHLS participants were invited to answer a COVID-19 questionnaire between 17th and 30th April 2020. A child-level data set was produced from the proxy responses of a guardian in the household ( $n = 4559$ ). The analytic sample included 635 children who had complete data and self-reported as FSM eligible. FSM eligibility did not distinguish between means-tested and universal

schemes. Accessing FSMs was defined as having received a FSM voucher or a cooked meal at school. Logistic regression was used to investigate (i) associations between characteristics and access to FSMs and (ii) associations between access to FSMs and household food insecurity measures. Characteristics in the model included school phase (infants [aged 4–7 years], juniors [aged 8–11 years], secondary [aged 12–18 years]), ethnicity of guardian, household income, country and school attendance during lockdown. Household income was taken from wave 9 of the UKHLS (2017–19) as the variable was more complete and could be equivalised for household composition (Organisation for Economic Co-operation and Development [OECD] scale).<sup>11</sup> Participants with missing income information were included in a fourth category. Measures of household food insecurity include reporting using a food bank in the last four weeks and reporting a household member feeling hungry but being unable to eat in the past week. All analyses accounted for survey design and sample weights to account for non-response and make the results representative to the UK population.

## Results

In the analytic sample, 635 children reported being eligible for FSMs, 49% of whom did not receive any form of FSM entitlement in April 2020 (Table 1). Our analyses found that children who were in the lowest income category were almost five times more likely to receive their FSM entitlement than high income children (odds ratio [OR]: 4.81; 95% confidence interval [CI]: 2.10, 11.03). Children who were still attending school were almost six times more likely to receive their FSM entitlement than children who could not (OR: 5.87; 95% CI: 1.70, 20.25). Children in Wales, compared with England, were 89% less likely to access a FSM (OR: 0.11; 95% CI: 0.03, 0.43). The analyses showed a large difference in the odds of receiving a FSM between school phase. Those in junior and secondary schools were more likely to access FSMs than those in infant schools (OR: 11.81 and 16.45, respectively). An interaction between income level and school phase was tested to investigate whether the association between income and receiving FSMs differs by

**Table 1**  
Characteristics associated with receiving a free school meal among children in lockdown among who are eligible for a free school meal in April 2020.

Variable	Did the child access their free school meal?					Logistic regression <sup>b</sup>	
	No ( $n = 341$ , 49%)		Yes ( $n = 294$ , 51%)		Total ( $n = 635$ )	OR	95% CI
	N	(%)	n	(%)			
<b>School phase</b>							
Infants (aged 4–7)	284	(77.26)	75	(22.74)	359	Ref	
Juniors (aged 8–11)	30	(23.69)	93	(76.31)	123	11.81***	[5.54, 25.19]
Secondary (aged 12–18)	27	(16.94)	126	(83.06)	153	16.45***	[7.59, 35.66]
<b>Guardian's ethnicity</b>							
White	315	(49.75)	252	(50.25)	567	Ref	
BAME	63	(43.49)	80	(56.51)	143	0.65	[0.09, 4.82]
<b>Equivalised household income<sup>a</sup></b>							
Low	123	(35.02)	192	(64.98)	315	4.81***	[2.10, 11.03]
Middle	119	(61.84)	79	(38.16)	198	2.46	[1.00, 6.10]
High	99	(81.94)	23	(18.06)	122	Ref	
Missing	37	(46.54)	38	(53.46)	75	1.9	[0.72, 5.02]
<b>Country</b>							
England	321	(46.73)	283	(53.27)	604	Ref	
Wales	13	(75.75)	17	(24.25)	30	0.11**	[0.03, 0.43]
Scotland	36	(65.59)	19	(34.41)	55	0.66	[0.21, 2.05]
Northern Ireland	8	(53.02)	13	(46.98)	21	0.23	[0.01, 4.81]
<b>Child at school in lockdown</b>							
Yes	16	(21.49)	32	(78.51)	48	5.87**	[1.70, 20.25]
No	362	(51.23)	300	(48.77)	662	Ref	

\* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ . Ref = reference group; OR = odds ratio; CI = confidence interval.

BAME = black and minority ethnic.

<sup>a</sup> Wave 9 household income (2017–18) equivalised using the OECD scale and categorised into quantiles.

<sup>b</sup> Multivariable logistic regression with school phase, guardian's ethnicity, household income, country and school attendance included in the model.

school phase of a child. The interaction term was not statistically significant.

In a second multivariable logistic regression model which controlled for the same characteristics, we assessed whether access to FSMs was associated with measures of food insecurity. First, access to FSMs was not associated with someone in the household feeling hungry but being unable to eat in the past week (OR: 0.99; 95% CI: 0.35, 2.82). Second, those who accessed their FSM entitlement were found to be 14 times more likely to have recently used a food bank (OR: 13.89; 95% CI: 2.27, 85.10).

## Discussion

The present analyses demonstrate that a significant proportion of eligible children could not access FSMs during the COVID-19 lockdown. As children who attended school were more likely to receive a meal, the results indicate that the FSM vouchers did not act as a sufficient replacement for receiving a meal at school.

These data also imply that pupils at secondary schools had better access to some form of the FSM scheme than pupils at infant and junior schools. However, the assessment of FSM eligibility in the study did not distinguish between the means-tested and universal scheme. Consequently, infant school children on the universal scheme but not eligible for the means-tested scheme may be misclassified. If the results were predominantly due to misclassification, we would expect to see an effect modification by income level. The interaction term was not significant, suggesting there is no difference in the likelihood of accessing a FSM by income level and school phase, indicating that misclassification does not explain this association.

Among FSM-eligible children, the lowest income children were more likely to access FSMs. Low-income households have been most greatly impacted by the COVID-19 lockdown,<sup>10</sup> so higher uptake likely reflects a greater need in these households to limit food insecurity. This hypothesis is supported by the increased likelihood of food bank use among children who accessed FSMs. Use of food banks in this group reveals an inadequacy of government welfare schemes to protect vulnerable, low-income families in the UK from food insecurity. Although this study was not able to explore the effect on dietary quality, preliminary findings from a study which compared dietary intake at lunch before and after school closures suggested FSM-eligible children had a lower dietary quality during the COVID-19 lockdown.<sup>12</sup> Further quantitative studies are needed to fully describe how these disruptions impacted existing inequalities in dietary intake.

The association significantly differed between countries which may reflect the varied approach to delivering FSMs during the COVID-19 lockdown. However, the sample size in each of the devolved nations is small and limits thorough interrogation of this association.

The present study made use of the most recent wave of a nationally representative longitudinal data set. A limitation of the data set is that FSM access is measured through two categorical questions which do not distinguish between different forms of FSMs or capture reasons behind lack of access. Future research should build on these limitations and seek to qualitatively determine reasons behind variation in FSM access during the lockdown.

## Conclusion

In the first month which UK schools were closed by COVID-19, this study used nationally representative data to highlight that half of all eligible children did not receive FSMs. It is concerning

that children from low-income families who could not attend school may have continued to not have access to nutritious meals, putting their physical and mental health at risk. This issue will only grow more critical if schools are required to close for a second national lockdown. For our practice and policy partners, these findings should signify that careful monitoring, review and improvement of the FSM voucher scheme is needed. Our results indicate that the FSM vouchers were not an acceptable substitute for standard FSM provision. School-level comparisons could provide valuable lessons on which forms of substitute FSMs were most effective. Without increased support, low-income families are at risk of increased food insecurity and negative health consequences during the COVID-19 pandemic, which will likely be exacerbated by the economic recession to follow.

## Author statements

### Ethical approval

This study is a secondary analysis of a data set and did not require ethical approval. The primary data collection in the Understanding Society was approved by the University of Essex Ethics Committee.

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### Competing interests

All authors have no conflicts of interests to declare.

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