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Increasing the availability of vegetarian meals in worksite cafeterias to increase their sales

Submission date
19/09/2023

Recruitment status
No longer recruiting

Registration date
21/09/2023

Overall study status
Completed

Last Edited
20/04/2026

Condition category
Nutritional, Metabolic, Endocrine

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
The study aims to address the health and environmental concerns associated with meat consumption in affluent countries. It intends to assess the effectiveness, feasibility, and acceptability of an intervention that promotes vegetarian meal options in worksite cafeterias' lunch offers. The intervention involves replacing one meat meal option with a vegetarian alternative. The study will determine whether this leads to an increase in the proportion of vegetarian meal sales and explore potential unintended consequences like changes in total site revenue and food waste.

Who can participate?
Worksite cafeterias that meet specific criteria are eligible to participate. They must offer at least three main meal options at lunch, including at least one vegetarian option and two meat-based options (so that a meat option can be swapped for a vegetarian option during the intervention period while still maintaining customer choice). Additionally, the sites should be willing to change their menus for the study period.

What does the study involve?
The study is implemented over a minimum period of 10 weeks with potentially 2 additional weeks of data collection (these fall into early December and will only be included in analyses if seasonal Christmas meals have not been introduced into menus or these have not disrupted the proportion of vegetarian meals available). Cafeterias will be randomly assigned to implement the intervention at different time points staggered over 6 weeks. During the intervention, cafeterias will increase the availability of vegetarian meals by replacing one meat meal option with a vegetarian one while maintaining the same total number of meal options.

What are the possible benefits and risks of participating?
Benefits may include contributing to research that addresses the health and environmental impact of meat consumption. Cafeterias may also benefit from increased sales of vegetarian meals. Risks could include potential disruptions in meal sales and increased food waste.

Where is the study run from?
University of Oxford (UK)

When is the study starting and how long is it expected to run for?
October 2022 to December 2023

Who is funding the study?
Economic and Social Research Council (UK)

Who is the main contact?
Dr Rachel Pechey, rachel.pechey@phc.ox.ac.uk

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
1

Study information

Scientific Title
The effect on sales of increased availability of vegetarian meals in worksite cafeterias

Study objectives
Offering a higher proportion of vegetarian meals increases their sales

Ethics approval required
Ethics approval required

Ethics approval(s)

Approved 14/04/2023, Medical Sciences Interdivisional Research Ethics Committee (Research Services, Boundary Brook House, Churchill Drive, Headington, Oxford, OX3 7GB, United Kingdom; +44 (0)1865 616575; ethics@medsci.ox.ac.uk), ref: R72710/RE006

Primary study design
Interventional

Study design
Interventional randomized controlled stepped-wedge field trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Diet sustainability

Interventions
This study evaluates the effectiveness, feasibility, and acceptance of increasing the relative availability of vegetarian (defined here as ovo-lacto vegetarian, i.e. containing no meat or fish, but possibly animal products such as dairy or eggs) main meal options on worksite cafeteria lunch counters. Cafeterias will increase their offer of vegetarian meal options at lunchtime by swapping out one meat meal option for a vegetarian alternative.

The study is implemented over a minimum period of 10 weeks with potentially 2 additional weeks of data collection (these fall into early December and will only be included in analyses if seasonal Christmas meals have not been introduced into menus or these have not disrupted the proportion of vegetarian meals available). Cafeterias will be randomly assigned to implement the intervention at different time points staggered over 6 weeks. During the intervention, cafeterias will increase the availability of vegetarian meals by replacing one meat meal option with a vegetarian one while maintaining the same total number of meal options.

Intervention Type
Behavioural

Primary outcome(s)
Percentage of vegetarian (out of total) meals (in units) sold in each cafeteria measured using centrally provided sales data, averaged for each week from 12 weeks prior to intervention until at least week 10 of the intervention. A further 2 weeks' data will be included if the availability of Christmas meals does not disrupt the intervention implementation.

Key secondary outcome(s)
1. Total environmental impact of meals sold, measured using an estimate of greenhouse gas emissions, eutrophication potential, water use, and land use (using an equivalent method to that described in https://www.pnas.org/doi/10.1073/pnas.2120584119), each week during the baseline and intervention period
2. Total energy purchased (kcal) from meals sold, measurement provided by the catering company, taken each week during the baseline and intervention period
3. Total site sales revenue (£GBP), measurement provided by the catering company, taken each

week during the baseline and intervention periods
4. Total food waste, measured in both kg and £GBP provided by the catering company, taken each week during the baseline and intervention period

Completion date
15/12/2023

Eligibility

Key inclusion criteria
N.B.: This study tests an intervention on the level of individual worksite cafeterias, so the researchers will specify eligibility for cafeterias here.

Eligible worksite cafeterias will:
1. Offer at least three main meal options at lunchtime (if the number varies systematically across the week, then a site will be eligible if at least three main meal options are offered on at least 4 out of 5 weekdays)
2. Currently offer at least two meat-based meals and at least one vegetarian meal (to ensure that a choice between meat/fish-based and vegetarian meals is possible at baseline and during the intervention)
3. Be willing to take part in the study and change their menus for the full study period

Participant type(s)
Employee

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
99 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Not sending at least 4 out of 6 weekly menu pictures during the pre-trial monitoring period, unless a further missing menu can be explained, e.g. by site closures

Date of first enrolment
19/04/2023

Date of final enrolment
16/10/2023

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
University of Oxford
Nuffield Department of Primary Care Health Sciences
Radcliffe Observatory Quarter
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Sponsor information

Organisation
University of Oxford

ROR
https://ror.org/052gg0110

Funder(s)

Funder type
Research council

Funder Name
Economic and Social Research Council

Alternative Name(s)
Social Science Research Council, ESRC, SSRC, UKRI ESRC

Funding Body Type
Government organisation

Funding Body Subtype

National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		15/04/2026	20/04/2026	Yes	No