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# Can embedding the MapMe intervention, a tool to improve parental acknowledgement and understanding of childhood overweight and obesity, in the National Child Measurement Programme lead to improved child weight outcomes at one year?

**Submission date**
10/08/2021

**Recruitment status**
No longer recruiting

**Registration date**
19/08/2021

**Overall study status**
Completed

**Last Edited**
22/09/2025

**Condition category**
Nutritional, Metabolic, Endocrine

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

## Plain English summary of protocol

Background and study aims
Child overweight can lead to serious short and long term health problems, resulting in high costs to the NHS and other services. Overweight affects 1 in 4 children starting school and 1 in 3 leaving primary school. Urgent action is needed to address this. Parents play a key role managing their children's weight but tend not to know when their child is overweight, and so are less likely to take action. All 4-5 and 10-11-year-olds in England are weighed and measured as part of the National Child Measurement Programme (NCMP), and parents receive the results by letter. MapMe supports parents to act upon the NCMP result by providing: 1) 'body image scales' (images of children ranging from underweight to very overweight) to help parents to understand if their child is overweight; 2) information on the consequences of child overweight, healthy eating, physical activity and sources of support. MapMe was tested in about 300 overweight children who achieved a healthier weight 1 year later, when compared to overweight children whose parents did not receive MapMe. We now need to confirm these findings in a better study with more children, to understand how MapMe works, and if it offers value for money. The study aims to understand whether the MapMe intervention can reduce child overweight, and if so how and at what cost.

Who can participate?
Reception and Year 6 pupils (usual age 4 - 5 years and 10 - 11 years)

What does the study involve?
We will first talk to parents and health professionals to ask them: 1) how we can improve MapMe, and 2) what information we should collect to find out how MapMe is delivered and used. About 56,000 families who agree to take part in the NCMP across 10 Local Authorities will

then be allocated by chance to one of 3 groups. Parents in each group will receive their child's NCMP results as usual, plus: Group 1 gets a letter with the paper-based MapMe body image scales and a link to the MapMe online materials after the NCMP measurement. Group 2 gets the same as Group 1 but also a booster letter 6 months later with a reminder of their child's results, the link to the MapMe online materials and another paper-based copy of the MapMe body image scales. Group 3 gets the standard NCMP measurement letter only. Groups 1 and 2 will be compared to group 3. All children will be weighed and measured again after 1 year. A selection of families will be invited to provide more information on child food intake and activity, and what help parents accessed, to help us understand how MapMe worked and if it is value for money. We will also ask some parents, and professionals who delivered MapMe, to tell us what they thought about it, and how it could be further improved. A Parent Involvement Panel has been created to ensure parents are involved across different stages of the research. To date members of a public involvement panel have played an important role in highlighting child overweight as a research priority and parents of primary school children have helped to shape the project and future public involvement.

What are the possible benefits and risks of participating?
Participants will not personally benefit from taking part. In the future, we will use the knowledge we get from this study to understand better how to communicate with parents about their child’s growth. Participants may find discussions about childhood weight status uncomfortable.

Where is the study run from?
Newcastle University (UK)

When is the study starting and how long is it expected to run for?
March 2020 to February 2024

Who is funding the study?
National Institute for Health and Care Research (NIHR) (UK)

Who is the main contact?
Professor Ashley Adamson, MapMe2@newcastle.ac.uk

# Contact information

### Type(s)
Scientific

### Contact name
Dr Angela Jones

### Contact details
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# Additional identifiers

### Central Portfolio Management System (CPMS)
49807

### National Institute for Health and Care Research (NIHR)
127745

### Protocol serial number
Grant Codes:

# Study information

### Scientific Title
Can embedding the MapMe intervention, a tool to improve parental acknowledgement and understanding of childhood overweight and obesity, in the National Child Measurement Programme lead to improved child weight outcomes at one year?

### Acronym
MapMe

### Study objectives
To understand whether the MapMe intervention can reduce child overweight, and if so how and at what cost

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
Approved 13/05/2021Newcastle University Faculty of Medical Sciences Ethics Committee (Medical School, Newcastle University, Framlington Place, Newcastle upon Tyne, NE2 4HH, UK; no telephone number provided; fmsethics@newcastle.ac.uk), ref: 2073/9947/2020, also 2148 /13605/2020

### Primary study design
Interventional

### Study design
Interventional cluster randomized controlled trial

### Study type(s)
Other

### Health condition(s) or problem(s) studied
Childhood overweight and obesity

### Interventions
Current interventions as of 24/07/2024:
The MapMe intervention includes body image scales (BIS) of known weight status for 4-5 and 10-

11-year-old children based on the same British growth reference clinical thresholds that are used by the National Child Measurement Programme (NCMP) to inform parents of their child's weight status. The BIS are designed to tap into the visual methods by which parents determine overweight (OW) in children, to help them understand what a child with overweight/obesity (OW /OB) looks like. The web-based format of MapMe shows parents the BIS and asks them to choose the image most resembling their child. Parents then enter their child's height and weight (both provided in the NCMP letter), sex and date of birth (DOB); they are then shown the 3D image and weight status that matches that data, thus facilitating parental acknowledgment of weight status. Parents are also shown a 3D image of an adult in the same weight category as their child's current category and given information about health risks of childhood OW, tapping into parental concerns of future OW in their child and raising awareness of potential health consequences. Information is included to support parents to prevent or address unhealthy weight gain in their child including brief advice on healthy eating, physical activity and signposts to sources of information and professional support, which include motivational and volitional materials for goal setting, practice, action and coping planning in family-based dietary and physical activity changes, positive family approaches focused on lifestyle rather than weight and positive family discussions focused on lifestyle rather than weight.

There will be two methods of delivery of the intervention:

a) Intervention 1: following the completion of child measurements by the NCMP parents will receive an enhanced post-measurement NCMP letter and a copy of the MapMe BIS in paper-based format and the link to the MapMe website.
b) Intervention 2: this is identical to Intervention 1 except parents receive a 'booster' letter 6 months after the initial intervention with a reminder of of their child's results, the link to the MapMe website, and another copy of the paper-based MapMe BIS prompting parents to continue to monitor their child's weight status.

Comparator (Control):
Those families receiving the usual delivery of the NCMP, that is, standard NCMP post-measurement letter only, will serve as the control condition. Following measurement completion parents will be informed of their child's measurements and their weight status, and will then be sign-posted to the standard care as appropriate to the child's weight status as offered within their LA.

Previous interventions:
The MapMe intervention includes body image scales (BIS) of known weight status for 4-5 and 10-11-year-old children based on the same British growth reference clinical thresholds that are used by the National Child Measurement Programme (NCMP) to inform parents of their child's weight status. The BIS are designed to tap into the visual methods by which parents determine OW in children, to help them understand what a child with OW/OB looks like. The web-based format of MapMe shows parents the BIS and asks them to choose the image most resembling their child. Parents then enter their child's height and weight (both provided in the NCMP letter), sex and date of birth (DOB); they are then shown the 3D image and weight status that matches that data, thus facilitating parental acknowledgment of weight status. Parents are also shown a 3D image of an adult in the same weight category as their child's current category and given information about health risks of childhood OW, tapping into parental concerns of future OW in their child and raising awareness of potential health consequences. Information is included to support parents to prevent or address unhealthy weight gain in their child including brief advice on healthy eating, physical activity and signposts to sources of information and professional support, which include motivational and volitional materials for goal setting, practice, action and coping planning in family-based dietary and physical activity changes, positive family approaches

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There will be two methods of delivery of the intervention:

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Comparator (Control):
Those families receiving the usual delivery of the NCMP, that is, standard NCMP post-measurement letter only, will serve as the control condition. Following measurement completion parents will be informed of their child's measurements and their weight status, and will then be sign-posted to the standard care as appropriate to the child's weight status as offered within their LA.

### Intervention Type
Other

### Primary outcome(s)
Child BMI Z score measured using height (cm), weight (kg), sex, age (years) at one year follow up

### Key secondary outcome(s)
At baseline and 12 months (unless otherwise noted):
1. Heath inequalities measured using Index of Multiple Deprivation (IMD)
2. Ethnicity measured using child NCMP records
3. Dietary intake of child measured using an online 24-hour food recall (intake24.co.uk). Completed by parent if child is aged 4-6 years and by child if aged 10-12 years on 2 weekend days
4. Physical activity and sedentary behaviour measured using accelerometer
5. Perception of overweight versus reality measured using a visual analogue scale
6. Self-esteem measured using the Lifespan Self-Esteem questionnaire
7. Child feeding behaviour measured using the Child Feeding Questionnaire (age 4-6y, parent-completed) or Dutch Eating Behaviour Questionnaire – Child version, short (age 10-12y, self-completion)
8. Quality of life measured using CHU9D and WAIte questionnaires, or proxies for younger children (at baseline, 6 months, 12 months)
9. Use of health services measured using Resources questionnaire (at baseline, 6 months, 12 months)
10. Out-of-pocket expenses measured using questionnaire (at baseline, 6 months, 12 months)

### Completion date
29/02/2024

## Eligibility

### Key inclusion criteria
1. All genders.
2. Age range: Reception and Year 6 pupils (usual age 4-5 years and 10-11 years) only

3. Participants are registered with a school in a Local Authority carrying out the National Child Measurement Programme, and part of the MapMe trial and not opted out of the NCMP by parent or carer.

### Participant type(s)
Mixed

### Healthy volunteers allowed
No

### Age group
Child

### Lower age limit
4 Years

### Upper age limit
11 Years

### Sex
All

### Total final enrolment
52012

### Key exclusion criteria
Parents of children aged 4-5 and 10-11 years, not part of or opting-out of the NCMP

### Date of first enrolment
01/09/2021

### Date of final enrolment
31/08/2022

## Locations

### Countries of recruitment
United Kingdom

England

### Study participating centre
**Newcastle City Council**
Civic Centre
Newcastle upon Tyne
United Kingdom
NE1 8QH

**Study participating centre**
**Durham County Council**
County Hall
Durham
United Kingdom
DH1 5UQ

**Study participating centre**
**Redcar & Cleveland Council**
Kirkleatham Street
Redcar
United Kingdom
TS10 1RT

**Study participating centre**
**Middlesbrough Council**
PO Box 500
Middlesbrough
United Kingdom
TS1 9FT

**Study participating centre**
**North Tyneside Council**
Quadrant
The Silverlink North
Cobalt Business Park
North Tyneside
United Kingdom
NE27 0BY

**Study participating centre**
**South Tyneside Council**
Town Hall And Civic Offices
Westoe Road
South Shields
United Kingdom
NE33 2RL

**Study participating centre**

**Isle of Wight Council**
Customer Service Centre
County Hall
High Street
Newport
United Kingdom
PO30 1UD

**Study participating centre**
**Devon County Council**
County Hall
Topsham Road
Exeter
United Kingdom
EX2 4QD

**Study participating centre**
**Coventry City Council**
Council House
Earl Street
Coventry
United Kingdom
CV1 5RR

**Study participating centre**
**Sefton Metropolitan Borough Council**
Town Hall
Oriel Road
Bootle
United Kingdom
L20 7AE

**Study participating centre**
**Stoke-on-Trent City Council**
Civic Centre
Glebe Street
Stoke on Trent
United Kingdom
ST4 1HH

# Sponsor information

**Organisation**
Newcastle University

**ROR**
https://ror.org/01kj2bm70

# Funder(s)

**Funder type**
Government

**Funder Name**
National Institute for Health Research (NIHR) (UK)

**Alternative Name(s)**
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**
Government organisation

**Funding Body Subtype**
National government

**Location**
United Kingdom

# Results and Publications

**Individual participant data (IPD) sharing plan**
The current data sharing plans for this study are unknown and will be available at a later date.

**IPD sharing plan summary**
Data sharing statement to be made available at a later date

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Results article | Nested sub study | 13/02/2025 | 24/03/2025 | Yes | No |
| Other files | Utility values for several health states from the WAItE descriptive system from a sample of the UK adult general population | 12/01/2024 | 22/09/2025 | No | No |

| | | | | | |
|---|---|---|---|---|---|
| Other publications | Development of the Weight-Specific Adolescent Instrument for Economic Evaluation (WAItE) | 27/01/2025 | 22/09/2025 | Yes | No |
| Other publications | The impact of three public and stakeholder groups via remote methods in the context of the MapMe2 study during the Covid-19 pandemic | 29/06/2022 | 22/09/2025 | Yes | No |
| Other publications | Validity and reliability of the MapMe child body size scales | 16/10/2024 | 22/09/2025 | Yes | No |
| Other publications | WAItE UK valuation study protocol | 16/11/2021 | 22/09/2025 | Yes | No |