

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	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 19/08/2021	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 24/03/2025	Condition category Nutritional, Metabolic, Endocrine	<input type="checkbox"/> 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

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Contact details

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

CPMS 49807, Grant Codes: NIHR127745

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 13/05/2021 Newcastle 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

Study design

Interventional cluster randomized controlled trial

Primary study design

Interventional

Secondary study design

Cluster randomised trial

Study setting(s)

Community

Study type(s)

Other

Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

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 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:

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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 focused on lifestyle rather than weight and positive family discussions focused on lifestyle rather than weight.

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Intervention Type

Other

Primary outcome measure

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

Secondary outcome measures

At baseline and 12 months (unless otherwise noted):

1. Health 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)

Overall study start date

01/03/2020

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

Age group

Child

Lower age limit

4 Years

Upper age limit

11 Years

Sex

Both

Target number of participants

Planned Sample Size: 55,000; UK Sample Size: 55,000

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

England

United Kingdom

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
Oriol 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

Sponsor details
Kings Gate
Newcastle upon Tyne
England
United Kingdom
NE1 7RU
-
sponsorship@newcastle.ac.uk

Sponsor type
University/education

Website
<http://www.ncl.ac.uk/>

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

Publication and dissemination plan

Current publication and dissemination plan as of 24/07/2024:

The Parent Involvement Panel will help us to develop creative ways of sharing the study results to inform as many people as possible. Results will also be published in journals and presented at conferences. The NCMP and Local Authority team members will share results with their colleagues across the country. If MapMe is found to have a positive impact on child weight outcomes, then the materials will become part of the standard NCMP process. Findings will be disseminated in academic journals; we anticipate at least four open-access peer-reviewed articles in high-impact journals including papers detailing the impact of the intervention on weight outcomes at 1-year post-intervention and the process evaluation to be published in journals such as the International Journal of Obesity and including NIHR Public Health Research.

Previous publication and dissemination plan:

The Parent Involvement Panel will help us to develop creative ways of sharing the study results to inform as many people as possible. Results will also be published in journals and presented at conferences. The NCMP and Local Authority team members will share results with their colleagues across the country. If MapMe is found to have a positive impact on child weight outcomes, then the materials will become part of the standard NCMP process and available on <https://www.nhs.uk>. Findings will be disseminated in academic journals; we anticipate at least four open-access peer-reviewed articles in high-impact journals including a trial protocol, papers detailing the impact of the intervention on weight outcomes at 1-year post-intervention and the process evaluation to be published in journals such as International Journal of Obesity and including NIHR Public Health Research.

Intention to publish date

01/03/2025

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		13/02/2025	24/03/2025	Yes	No