

# Brushing reminder for good oral health

<b>Submission date</b> 27/04/2017	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 10/05/2017	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 03/12/2024	<b>Condition category</b> Oral Health	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Current plain English summary as of 26/10/2020:

### Background and study aims

Tooth decay is very common, affecting nearly half of young people aged 12-15 years in deprived areas. Regular tooth brushing with fluoride toothpaste can prevent it. In New Zealand a study found that sending unemployed young adults a text message on their mobile phone every week increased how often they brushed their teeth. The aim of this study is to find out whether an intervention which involves a school lesson about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth, and is cost effective.

### Who can participate?

Young people aged 11-13 years old (Year 7 and Year 8, 1st Year and 2nd Year in Scotland) in participating schools in deprived areas in England (South Yorkshire and West Yorkshire), Scotland and Wales (South Wales).

### What does the study involve?

A pilot study was conducted in 10 schools and recruited 1073 young people between September 2017 and May 2018 to check whether it was possible to run the main study and to find the best ways of doing so. The main study started in September 2018 and aims to involve a total of 48 (updated to 38 on 05/09/2017, updated to 42 schools on 01.05.2019) schools (including the pilot schools) and 5760 (updated to approximately 4560 on 05/09/2017, updated to 5040 on 01/05/2019) young people. In each school one year group is randomly allocated to receive the intervention and another year group does not receive the intervention. Over the following 2.5 years dentists go into the schools to conduct dental examinations and young people and parents /carers are asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This shows whether there is a difference between those who receive the intervention and those who do not. The researchers also find out how well the intervention is working from school staff, young people and parents /carers.

### What are the possible benefits and risks of participating?

Although taking part may not directly benefit schools and young people/parents/carers, it is hoped that the results will help other schools and young people in the future to have healthy teeth. Schools are offered £1000 to cover the extra administrative tasks associated with taking

part in this study. All young people who complete the first questionnaire and dental assessment are given a £10 shopping voucher to say thank you for their time. Young people are also given a £5 shopping voucher after they have completed the final questionnaire and dental assessment to say thank you. Furthermore, all parents/carers who complete the parents/carer questionnaire are entered into a prize draw with the chance of winning £300 in vouchers (one prize draw annually). There are no known risks from taking part in the study. The burden of participation for young people/parents/carers is minimal, limited to the time taken to complete questionnaires and be seen for dental assessments (young people only). It is hoped that young people will enjoy taking part and benefit from engaging with the study.

Where is the study run from?

1. Tayside Medical Science Centre & University of Dundee (UK)
2. University of Sheffield (UK)
3. University of Leeds (UK)
4. Cardiff University & Cardiff & Vale UHB (UK)
5. York Trials Unit (YTU) (UK)

When is the study starting and how long is it expected to run for?  
January 2017 to May 2022

Who is funding the study?

Health Technology Assessment Programme (UK)

Who is the main contact?

1. Prof. Zoe Marshman (scientific)  
Z.Marshman@sheffield.ac.uk
2. Prof. Nicola Innes (scientific)  
InnesN@cardiff.ac.uk
3. Katie Whiteside (public)  
katie.whiteside@york.ac.uk

Previous plain English summary from 02/05/2019 to 26/10/2020:

Background and study aims

Tooth decay is very common, affecting nearly half of young people aged 12-15 years in deprived areas. Regular tooth brushing with fluoride toothpaste can prevent it. In New Zealand a study found that sending unemployed young adults a text message on their mobile phone every week increased how often they brushed their teeth. The aim of this study is to find out whether an intervention which involves a school lesson about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth, and is cost effective.

Who can participate?

Young people aged 11-13 years old (Year 7 and Year 8, 1st Year and 2nd Year in Scotland) in participating schools in deprived areas in England (South Yorkshire and West Yorkshire), Scotland and Wales (South Wales).

What does the study involve?

A pilot study was conducted in 10 schools and recruited 1073 young people between February and November 2017 to check whether it was possible to run the main study and to find the best ways of doing so. The main study started in October 2018 and aims to involve a total of 48 (updated to 38 on 05/09/2017, updates to 42 schools on 01.05.2019) schools (including the pilot schools) and 5760 (updated to approximately 4560 on 05/09/2017, updated to 5040 on 01/05

/2019) young people. In each school one year group is randomly allocated to receive the intervention and another year group does not receive the intervention. Over the following 3 years dentists go into the schools to conduct dental examinations and young people and parents /carers are asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This shows whether there is a difference between those who receive the intervention and those who do not. The researchers also find out how well the intervention is working from school staff, young people and parents /carers.

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Where is the study run from?

1. Tayside Medical Science Centre & University of Dundee (UK)
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When is the study starting and how long is it expected to run for?  
January 2017 to October 2022

Who is funding the study?

Health Technology Assessment Programme (UK)

Who is the main contact?

1. Prof. Zoe Marshman (scientific)  
Z.Marshman@sheffield.ac.uk
2. Prof. Nicola Innes (scientific)  
n.p.innes@dundee.ac.uk
3. Mrs Hannah Ainsworth (public)  
hannah.ainsworth@york.ac.uk

Previous plain English summary from 11/09/2018 to 02/05/2019:

Background and study aims

Tooth decay is very common, affecting nearly half of young people aged 12-15 years in deprived areas. Regular tooth brushing with fluoride toothpaste can prevent it. In New Zealand a study found that sending unemployed young adults a text message on their mobile phone every week increased how often they brushed their teeth. The aim of this study is to find out whether an intervention which involves a school lesson about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth, and is cost effective.

### Who can participate?

Young people aged 11-13 years old (Year 7 and Year 8, 1st Year and 2nd Year in Scotland) in participating schools in deprived areas in England (South Yorkshire and West Yorkshire), Scotland and Wales (South Wales).

### What does the study involve?

A pilot study is being conducted in 10 schools with approximately 1200 young people to check whether it is possible to run the main study and to find the best ways of doing so. The main study would involve a total of 48 (updated to 38 on 05/09/2017) schools and 5760 (updated to approximately 4560 on 05/09/2017) young people. In each school one year group is randomly allocated to receive the intervention and another year group does not receive the intervention. Over the following 3 years dentists go into the schools to conduct dental examinations and young people and parents/carers are asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This shows whether there is a difference between those who receive the intervention and those who do not. The researchers also find out how well the intervention is working from school staff, young people and parents/carers.

### What are the possible benefits and risks of participating?

Although taking part may not directly benefit schools and young people/parents/carers, it is hoped that the results will help other schools and young people in the future to have healthy teeth. Schools are offered £1000 to cover the extra administrative tasks associated with taking part in this study. All young people who agree to take part are entered into a prize draw with the chance of winning £100 in vouchers. Furthermore, all young people who complete the first questionnaire and dental assessment given a £10 shopping voucher to say thank you for their time. Young people are also given a £5 shopping voucher after they have completed the final questionnaire and dental assessment to say thank you. Finally, all parents/carers who complete the final parents/carer questionnaire are entered into a prize draw with the chance of winning £100 in vouchers. There are no known risks from taking part in the study. The burden of participation for young people/parents/carers is minimal, limited to the time taken to complete questionnaires and be seen for dental assessments (young people only). It is hoped that young people will enjoy taking part and benefit from engaging with the study.

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3. Mrs Hannah Ainsworth (public)  
hannah.ainsworth@york.ac.uk

#### Original plain English summary:

##### Background and study aims

Tooth decay is very common, affecting nearly half of young people aged 12-15 years in deprived areas. Regular tooth brushing with fluoride toothpaste can prevent it. In New Zealand a study found that sending unemployed young adults a text message on their mobile phone every week increased how often they brushed their teeth. The aim of this study is to find out whether an intervention which involves a school lesson about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth, and is cost effective.

##### Who can participate?

Young people aged 11-13 years old (Year 7 and Year 8, 1st Year and 2nd Year in Scotland) in participating schools in deprived areas in England (South Yorkshire and West Yorkshire), Scotland and Wales (South Wales).

##### What does the study involve?

A pilot study is being conducted in 10 schools with approximately 1200 young people to check whether it is possible to run the main study and to find the best ways of doing so. During the pilot 1073 young people will be randomised into the trial. The main trial aims to recruit a further 32 schools and 3967 young people. Including the pilot, in total the trial aims to recruit 42 schools and 5040 young people in total. In each school one year group is randomly allocated to receive the intervention and another year group does not receive the intervention. Over the following 3 years dentists go into the schools to conduct dental examinations and young people and parents /carers are asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This shows whether there is a difference between those who receive the intervention and those who do not. The researchers also find out how well the intervention is working from school staff, young people and parents /carers.

##### What are the possible benefits and risks of participating?

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##### Where is the study run from?

1. Tayside Medical Science Centre & University of Dundee (UK)
2. University of Sheffield (UK)
3. University of Leeds (UK)
4. Cardiff University & Cardiff & Vale UHB (UK)

When is the study starting and how long is it expected to run for?  
January 2017 to October 2021

Who is funding the study?  
NIHR Health Technology Assessment Programme (UK)

Who is the main contact?  
1. Dr Zoe Marshman (scientific)  
Z.Marshman@sheffield.ac.uk  
2. Prof. Nicola Innes (scientific)  
n.p.innes@dundee.ac.uk  
3. Mrs Hannah Ainsworth (public)  
hannah.ainsworth@york.ac.uk

**Study website**  
[bit.ly/bright-trial](http://bit.ly/bright-trial)

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Prof Zoe Marshman

**ORCID ID**  
<http://orcid.org/0000-0003-0943-9637>

**Contact details**  
School of Clinical Dentistry  
The University of Sheffield  
Claremont Crescent  
Sheffield  
United Kingdom  
S10 2TA  
+44 (0)114 215 9398  
Z.Marshman@sheffield.ac.uk

**Type(s)**  
Scientific

**Contact name**  
Prof Nicola Innes

**ORCID ID**  
<http://orcid.org/0000-0002-9984-0012>

**Contact details**  
School of Dentistry  
College of Biomedical & Life Sciences

Cardiff University  
Heath Park  
Cardiff  
United Kingdom  
CF14 4XY  
-  
InnesN@cardiff.ac.uk

**Type(s)**

Public

**Contact name**

Ms Katie Whiteside

**Contact details**

York Trials Unit, Department of Health Sciences  
ARRC Building, University of York  
York  
United Kingdom  
YO10 5DD  
+44 (0)1904 326620  
katie.whiteside@york.ac.uk

## Additional identifiers

**EudraCT/CTIS number**

2013-001944-76

**IRAS number**

223377

**ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

HTA 15/166/08; Protocol Version 9.0, IRAS 223377

## Study information

**Scientific Title**

BRIGHT Trial: Brushing RemInder 4 Good oral HealTh: the clinical and cost-effectiveness of a Short Messaging Service behaviour change programme to improve the oral health of young people living in deprived areas

**Acronym**

BRIGHT

**Study objectives**

Does a Short Messaging Service (SMS) behaviour change programme with a classroom-based session improve the oral health of young people living in deprived areas?

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

East of Scotland Research Ethics Service REC 1, 14/08/2017, ref: 17/ES/0096

**Study design**

Multi-centre school-based assessor-blinded two-arm cluster-randomized controlled trial with an internal pilot trial

**Primary study design**

Interventional

**Secondary study design**

Cluster randomised trial

**Study setting(s)**

School

**Study type(s)**

Prevention

**Participant information sheet**

Available on the BRIGHT website: [bit.ly/bright-trial](https://bit.ly/bright-trial)

**Health condition(s) or problem(s) studied**

Dental health

**Interventions**

Current interventions as of 26/10/2020:

The BRIGHT project is using a cluster randomized controlled trial (RCT) to test whether an intervention which involves a short classroom-based session embedded in the curriculum about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth and to find out how cost-effective it is.

The trial is running in schools in deprived areas in England, Scotland and Wales. First, an internal pilot study was conducted, to check whether it was possible to run the main trial and the best ways of doing so. The pilot ran in 10 schools, with 1073 young people. The feasibility of allocating within schools was tested by randomizing these schools, in a ratio of 1:1, into one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) received the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) acted as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) received the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) acted as the control group

An allocation sequence, stratified by school using blocks of size two, was generated by an independent York Trials Unit (YTU) statistician. This process proved feasible in the pilot and limited within-school (i.e. between year group) contamination was observed; therefore, within-school randomisation was also used in the main trial.

The pilot showed that the main trial was possible. The trial has randomised 42 schools (10 in the pilot and 32 in the main trial), and a total of 4680 young people aged between 11-13 years of age have been enrolled in the study.



Outcome information will be collected for 2.5 years; dentists will go into schools to conduct dental examinations and young people and parents/carers will be asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth, how much tooth decay affects their lives and health resource use. This will allow the trialists to investigate whether there is a difference between those who receive the intervention and those who do not. The trialists will also find out how well the intervention is working from school staff, young people and parents/carers.

Previous interventions from 24/02/2020 to 26/10/2020:

The BRIGHT project is using a cluster randomized controlled trial (RCT) to test whether an intervention which involves a short classroom-based session embedded in the curriculum about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth and to find out how cost-effective it is.

The trial is running in schools in deprived areas in England, Scotland and Wales. First, an internal pilot study was conducted, to check whether it was possible to run the main trial and the best ways of doing so. The pilot ran in 10 schools, with 1073 young people. The feasibility of allocating within schools was tested by randomizing these schools, in a ratio of 1:1, into one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) received the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) acted as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) received the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) acted as the control group

An allocation sequence, stratified by school using blocks of size two, was generated by an independent YU statistician. If the pilot study showed that this method was not feasible and there was found to be excessive contamination between school years, then in the main trial, the unit of randomization would be switched to the school. Schools would be randomized 1:1 to receive the intervention or control. Randomization by school would be undertaken by an independent YU statistician using minimization.

The pilot showed that the main trial was possible, the trial has recruited 42 schools (10 in the pilot and 32 in the main trial), and a total of 4680 young people aged between 11-13 years of age have been enrolled in the study. The intervention has been allocated within each participating school, in a ratio of 1:1, to one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) will receive the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) will act as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) will receive the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) will act as the control group

Again, an allocation sequence, stratified by school using blocks of size two, was generated by an independent YU statistician.

Outcome information will be collected for 3 years; dentists will go into schools to conduct dental examinations and young people and parents/carers will be asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This will allow the trialists to investigate whether there is a difference between those who receive the intervention and those who do not. The trialists will also find out how well the intervention is working from school staff, young people and parents/carers.

Previous interventions as of 11/09/2018:

The BRIGHT project will use a cluster randomised controlled trial (RCT) to test whether an intervention which involves a short classroom-based session embedded in the curriculum about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth and how cost effective it is.

The trial will run in schools in deprived areas in England, Scotland and Wales. First, an internal

pilot study will be conducted, to check whether it is possible to run the main trial and the best ways of doing so. The pilot will run in 10 schools, with approximately 1200 young people. The feasibility of allocating within schools will be tested by randomising these schools 1:1 into one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) will receive the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) will act as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) will receive the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) will act as the control group

An allocation sequence, stratified by school using blocks of size two, will be generated by an independent YFU statistician. If the pilot study suggests this method is not feasible and there proves to be excessive contamination between school years, then in the main trial, the unit of randomisation will switch to the school. Schools will be randomised 1:1 to receive the intervention or control. Randomisation by school will be undertaken by an independent YFUs statistician using minimisation.

If the pilot shows that the main trial is possible, the trial will recruit 42 schools (10 in the pilot and 32 in the main trial), and 5040 young people aged between 11-13 years of age. Please note that the pilot has been completed, and the main trial is now underway. The intervention will be allocated within each participating school 1:1 to one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) will receive the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) will act as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) will receive the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) will act as the control group

Again, an allocation sequence, stratified by school using blocks of size two, will be generated by an independent YFU statistician.

Outcome information will be collected for 3 years; dentists will go into schools to conduct dental examinations and young people and parents/carers will be asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This will allow the trialists to investigate whether there is a difference between those who receive the intervention and those who do not. The trialists will also find out how well the intervention is working from school staff, young people and parents/carers.

Current interventions as of 05/09/2017:

The BRIGHT project will use a cluster randomised controlled trial (RCT) to test whether an intervention which involves a short classroom-based session embedded in the curriculum about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth and how cost effective it is.

The trial will run in schools in deprived areas in England, Scotland and Wales. A pilot trial will be conducted to check whether it is possible to run the main trial and the best ways of doing so. The pilot will run in 10 schools with approximately 1200 young people. If the pilot shows the main trial is possible we will involve a total of 48 schools and approximately 5760 young people.

In the pilot trial, the feasibility of allocating within schools will be tested by randomising schools 1:1 to one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year in Scotland) will receive the intervention and pupils of 12-13 years (Year 8, 2nd Year in Scotland) will act as the control group
2. Pupils of 12-13 years (Year 8, 2nd Year in Scotland) will receive the intervention and pupils of 11-12 years (Year 7, 1st Year in Scotland) will act as the control group

An allocation sequence, stratified by school using blocks of size two, will be generated by an independent YFU statistician. If the pilot study suggests this method is not feasible and there proves to be excessive contamination between school years, then in the main trial, the unit of

randomisation will switch to the school. Schools will be randomised 1:1 to receive the intervention or control. Randomisation by school will be undertaken by an independent YTU statistician using minimisation.

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#### Previous interventions:

The BRIGHT project will use a cluster randomised controlled trial (RCT) to test whether an intervention which involves a short classroom-based session embedded in the curriculum about dental health followed by a series of text messages reduces tooth decay, increases how often (and how well) young people brush their teeth and how cost effective it is.

The trial will run in schools in deprived areas in England, Scotland and Wales. A pilot trial will be conducted to check whether it is possible to run the main trial and the best ways of doing so. The pilot will run in 10 schools with 1200 young people. If the pilot shows the main trial is possible we will involve a total of 48 schools and 5760 young people.

In the pilot trial, the feasibility of allocating within schools will be tested by randomising schools 1:1 to one of two regimes:

1. Pupils of 11-12 years (Year 7, 1st Year on Scotland) will receive the intervention and pupils of 12-13 years (Year 8) will act as the control group
2. Pupils of 12-13 years (Year 8) will receive the intervention and pupils of 11-12 years (Year 7, 2nd Year in Scotland) will act as the control group

An allocation sequence, stratified by school using blocks of size two, will be generated by an independent YTU statistician. If the pilot study suggests this method is not feasible and there proves to be excessive contamination between school years, then in the main trial, the unit of randomisation will switch to the school. Schools will be randomised 1:1 to receive the intervention or control. Randomisation by school will be undertaken by an independent YTuS statistician using minimisation.

Outcome information will be collected for 3 years; dentists will go into schools to conduct dental examinations and young people and parents/carers will be asked to fill out questionnaires to collect information about tooth decay, how often they brush their teeth and how much tooth decay affects their lives. This will allow the trialists to investigate whether there is a difference between those who receive the intervention and those who do not. The trialists will also find out how well the intervention is working from school staff, young people and parents/carers.

#### Intervention Type

Mixed

#### Primary outcome measure

Current primary outcome measure as of 26/10/2020:

Presence of at least one treated or untreated carious lesion in any permanent tooth, measured at the young person-level at 2.5 years follow-up using the permanent tooth index 'DMFT' (Decayed, Missing, and Filled Teeth) where:

1. Decay is measured as carious lesions extending into dentine - International Caries Detection and Assessment System (ICDAS) levels 4-6 ("obvious decay experience")
2. Missing includes all teeth extracted due to caries
3. Filled includes any restoration but not an obvious pit or fissure sealant

Previous primary outcome measure from 24/02/2020 to 26/10/2020:

Presence of at least one treated or untreated carious lesion in any permanent tooth, measured at the young person-level at 3 years follow-up using the permanent tooth index 'DMFT' (Decayed, Missing, and Filled Teeth) where:

1. Decay is measured as carious lesions extending into dentine - International Caries Detection and Assessment System (ICDAS) levels 4-6 ("obvious decay experience")
2. Missing includes all teeth extracted due to caries
3. Filled includes any restoration but not an obvious pit or fissure sealant

Previous primary outcome measure:

Incidence of carious lesions in permanent teeth, measured using decayed, missing, and filled teeth (DMFT) index, where decay is measured as caries into dentine - International Caries Detection and Assessment System [ICDAS] levels 4-6, at 3 years follow up

### **Secondary outcome measures**

Current secondary outcome measures as of 26/10/2020:

1. Frequency of twice-daily tooth brushing, measured using self-report: baseline, at time of CBS (pilot only), between CBS and 12 weeks (pilot only), 6 months, 1 year, 2 years (pilot only) and 2.5 years; clinically assessed plaque levels and gingival bleeding scores recorded at baseline, 2 years (pilot only) and 2.5 years
2. Caries prevalence for all carious lesions at 2 years (pilot only) and 2.5 years: Presence of at least one treated or untreated carious lesion of any severity (ICDAS levels 1-6) in any permanent tooth at 2 years (pilot only) and 2.5 years clinical follow-up
3. Number of treated or untreated carious teeth (using the DMFT) at 2 years (pilot only) and 2.5 years (ICDAS 1-6), and caries into dentine (ICDAS 4-6) at 2 years (pilot only) and 2.5 years follow-up
4. Caries prevalence for obvious decay experience at 2 years (pilot only) - Presence of at least one treated or untreated carious lesion in any permanent tooth, measured at the young person-level using DMFT where decay is measured as caries into dentine (ICDAS levels 4-6), at 2 years follow-up (pilot only)
5. Child health-related quality of life and oral health-related quality of life, measured using Child Health Utility-9D and CARIES-QC at baseline, 1 year, 2 years (pilot only), and 2.5 years
6. School attendance, measured using school records at baseline, 1 year, 2 years (pilot only), and 2.5 years
7. Cost-effectiveness. Resource use will be assessed via parent questionnaires at baseline, 1 year, 2 years (pilot only) and 2.5 years and may be estimated from routine data sources. Quality-adjusted life years will be calculated using CHU-9D data from young people via questionnaires. Cost-effectiveness will be calculated over 2.5 years and modelled to a child's lifetime.

Previous secondary outcome measures from 24/02/2020 to 26/10/2020:

1. Frequency of twice-daily tooth brushing, measured using self-report: 0, at time of CBS (pilot only), 3 months (pilot only), 6 months, 1, 2 and 3 years, confirmed by clinically assessed plaque levels and gingival bleeding scores recorded at 0, 2 and 3 years
2. Caries prevalence for all carious lesions at 2 and 3 years: Presence of at least one treated or untreated carious lesion of any severity (ICDAS levels 1-6) in any permanent tooth at 2 and 3 years clinical follow-up
3. Number of treated or untreated carious teeth (using the DMFT) at 2 and 3 years (ICDAS 1-6),

and caries into dentine (ICDAS 4-6) at 2 and 3 years follow-up

4. Caries prevalence for obvious decay experience at 2 years - Presence of at least one treated or untreated carious lesion in any permanent tooth, measured at the young person-level using DMFT where decay is measured as caries into dentine (ICDAS levels 4-6), at 2 years follow-up
5. Child health-related quality of life and oral health-related quality of life, measured using Child Health Utility-9D and CARIES-QC at 0, 1, 2, 3 years
6. School attendance, measured using school records at 0, 1, 2, 3 years

Previous secondary outcome measures:

1. Frequency of twice-daily tooth brushing, measured using self-report: 0, at time of CBS (pilot only), 3 months (pilot only), 6 months, 1, 2 and 3 years, confirmed by clinically assessed plaque levels and gingival bleeding scores recorded at 0, 2 and 3 years
2. Incidence of carious lesions in permanent teeth at 2 years, measured using DMFT where decay is measured as caries into dentine - International Caries Detection and Assessment System [ICDAS] levels 4-6, at 2 years follow up
3. Child health-related quality of life and oral health-related quality of life, measured using Child Health Utility-9D and CARIES-QC at 0, 1, 2, 3 years
4. Oral health behaviours, measured using self-report: 0, at time of CBS (pilot only), 3 months (pilot only), 6 months, 1, 2, 3 years
5. Cost-effectiveness, measured using parent self-report resource use at 0, 1, 2, 3 years
6. School attendance, measured using school records at 0, 1, 2, 3 years
7. Intervention compliance, measured using school self-report at the time of classroom-based session and SMS records at the end of the intervention period (TBC)

### **Overall study start date**

01/01/2017

### **Completion date**

26/05/2022

## **Eligibility**

### **Key inclusion criteria**

Current inclusion criteria as of 05/09/2017:

1. Attend a participating school
2. Aged 11-12 years (in Year 7 in England/Wales and 1st Year in Scotland) or 12-13 years (in Year 8 in England/Wales and 2nd Year in Scotland)

Previous inclusion criteria:

1. Attend a participating school
2. Aged 11-12 years (in Year 7, England/Wales and S1 year in Scotland) or 12-13 years (in Year 8 in England/Wales and S2 Year in Scotland)

### **Participant type(s)**

Other

### **Age group**

Child

### **Lower age limit**

11 Years

**Upper age limit**

13 Years

**Sex**

Both

**Target number of participants**

42 secondary schools: 120 pupils per school. Total of 5040 young people

**Total final enrolment**

4699

**Key exclusion criteria**

No functioning mobile telephone

**Date of first enrolment**

01/07/2017

**Date of final enrolment**

30/06/2019

**Locations****Countries of recruitment**

England

Scotland

United Kingdom

Wales

**Study participating centre****Tayside Medical Science Centre & University of Dundee**

Dundee Dental Hospital and School

Park Place

University of Dundee

Dundee

United Kingdom

DD1 4HR

**Study participating centre****University of Sheffield**

School of Clinical Dentistry

Claremont Crescent

Sheffield

United Kingdom  
S10 3PE

**Study participating centre**

**University of Leeds**  
Leeds Dental School  
Leeds  
United Kingdom  
LS2 9JT

**Study participating centre**

**Cardiff University & Cardiff & Vale UHB**  
Cardiff University Dental School  
College of Biomedical and Life Sciences  
Cardiff  
United Kingdom  
CF12 4XY

## **Sponsor information**

**Organisation**

Cardiff University

**Sponsor details**

c/o Chris Shaw  
Research Integrity, Governance and Ethics Team  
Research and Innovation Services  
Cardiff University  
7th Floor, McKenzie House  
30-36 Newport Road  
Cardiff  
Wales  
United Kingdom  
CF24 0DE  
+44 (0)29 208 79130  
shawc3@cardiff.ac.uk

**Sponsor type**

University/education

**Website**

<http://www.cardiff.ac.uk/>

ROR

<https://ror.org/03kk7td41>

## Funder(s)

### Funder type

Government

### Funder Name

Health Technology Assessment Programme

### Alternative Name(s)

NIHR Health Technology Assessment Programme, HTA

### 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 26/10/2020:

The results will be published in an HTA monograph and high impact, peer-reviewed dental journals and in education academic journals and newsletters. The HTA report will be submitted in July 2022. The results will be presented at the International Association for Dental Research, British Association for Study of Community Dentistry and Secondary Education conference. The findings will also be disseminated to the wider public health community via the Public Health England annual conference and secondary school education communities.

Previous publication and dissemination plan:

The results will be published in an HTA monograph and high impact, peer-reviewed dental journals and in education academic journals and newsletters. The intent to publish date is October 2022. The results will be presented at the International Association for Dental Research, British Association for Study of Community Dentistry and Secondary Education conference. The findings will also be disseminated to the wider public health community via the Public Health England annual conference and secondary school education communities.

### Intention to publish date

31/07/2023



## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available upon request from the Chief Investigator (Prof. Nicola Innes [InnesN@cardiff.ac.uk] or Prof. Zoe Marshman [z.marshman@sheffield.ac.uk]). Requests will be considered by the Trial Management Group on a case-by-case basis. Data will be made available for secondary analyses, and only anonymised data will be provided.

## IPD sharing plan summary

Available on request

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>	protocol	23/07/2019	25/07/2019	Yes	No
<a href="#">Results article</a>	Internal pilot study	22/10/2021	26/10/2021	Yes	No
<a href="#">Interim results article</a>		27/01/2023	30/01/2023	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Results article</a>		08/01/2024	09/01/2024	Yes	No
<a href="#">Results article</a>	Process evaluation	01/09/2024	12/09/2024	Yes	No
<a href="#">Other publications</a>		25/11/2024	03/12/2024	Yes	No