

Using other members of the dental team to provide oral care for residents in care homes

Submission date 29/10/2020	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 03/12/2021	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 18/03/2025	Condition category Oral Health	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Poor oral health for older adults residing in care homes is a significant public health problem. Unlike previous generations, about half of all care home residents now have some of their own natural teeth, but their oral health is much worse than their community living peers. These can give rise to significant avoidable health and social care costs. Despite this, dental service provision in care homes is poor and extremely variable.

The aim of this study is to undertake a cluster-randomised controlled trial to determine whether Dental Care Professionals (DCPs) could reduce plaque levels (improve the oral cleanliness) of older adults (over 65 years of age) residing in care homes over a 6-month period, when compared to 'treatment as usual' (commonly a reactive and ad hoc service provided by dentists). In addition, the researchers aim to determine whether this effect is sustainable over a further 6-month follow-up period.

Who can participate?

Residents over the age of 65 years; who are dentate or partially dentate (at least six natural teeth); and a full-time resident in the care facility

What does the study involve?

Care homes will be randomly divided into two groups: intervention and control.

The intervention consists of an oral health assessment of residents. Dental therapists will visit the care home every 6 months and undertake any treatment the participating residents require. Dental nurses will visit the care home monthly for the first three months then 3-monthly afterwards to provide advice on how to improve the oral health of the participating residents, apply fluoride to teeth as required. They may also provide advice on the Eatwell guide.

The control will be routine practice.

Trained dentists will collect clinical information at the start of the study. Other data will be collected via questionnaires administered by trial managers. After 12 months, the health of the residents' mouths will be assessed again, and the questionnaires administered again and findings will be compared to those at the start of the study. Residents, managers and staff will be interviewed to assess the acceptability of the proposed intervention.

What are the possible benefits and risks of participating?

The study will help the researchers to understand whether using different members of the dental team can improve oral health. If the results are positive, this will help us to plan future services. Other than the time commitment taking part in the study, the researchers do not anticipate there being any risks.

Where is the study run from?

Bangor University (UK)

When is the study starting and how long is it expected to run for?

August 2018 to September 2025

Who is funding the study?

NIHR Evaluation, Trials and Studies Co-ordinating Centre (NETSCC) (UK)

Who is the main contact?

Prof. Paul Brocklehurst

p.brocklehurst@bangor.ac.uk

Contact information

Type(s)

Scientific

Contact name

Prof Paul Brocklehurst

ORCID ID

<http://orcid.org/0000-0002-6789-2774>

Contact details

Bangor University

School of Healthcare Sciences

Bangor

United Kingdom

LL57 2EF

+44 (0)1248 383218

p.brocklehurst@bangor.ac.uk

Type(s)

Scientific

Contact name

Dr Gerald McKenna

ORCID ID

<http://orcid.org/0000-0001-8478-1673>

Contact details

Queen's University Belfast

Centre for Public Health

Belfast
United Kingdom
BT12 6BA
+44 (0)28 9097 8999
g.mckenna@qub.ac.uk

Type(s)
Scientific

Contact name
Prof Georgios Tsakos

ORCID ID
<http://orcid.org/0000-0002-5086-235X>

Contact details
Department of Epidemiology and Public Health
University College London
1-19 Torrington Place
London
United Kingdom
WC1E 6BT
+44 (0)207 6795614
g.tsakos@ucl.ac.uk

Type(s)
Public

Contact name
Mrs Alison Jenkins

ORCID ID
<http://orcid.org/0000-0003-1963-4903>

Contact details
NORTH
Meirion Building
Normal Site
Bangor University
Holyhead Road
Bangor
United Kingdom
LL57 2PZ
+44 (0)1248 382442
a.jenkins@bangor.ac.uk

Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number

297182

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

IRAS 297182, CPMS 49709

Study information

Scientific Title

uSing rolE-substitutioN In care-homes to improve oRal health

Acronym

SENIOR

Study objectives

The aim of this study is to undertake a cluster-randomised controlled trial to determine whether Dental Care Professionals (DCPs) could reduce plaque levels (improve the oral cleanliness) of dentate older adults (over 65 years of age) residing in care-homes over a 6-month period, when compared to 'treatment as usual' (commonly a reactive and ad hoc service provided by dentists). In addition, the researchers aim to determine whether this effect is sustainable over a further 6-month follow-up period.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 05/05/2021, Wales Research Ethics Committee 5 Bangor (Health and Care Research Wales, Castlebridge 4, 15-19 Cowbridge Road East, Cardiff, CF11 9AB, UK; +44 (0)2920 785738; Wales.REC5@wales.nhs.uk), REC ref: 21/WA/0116

Study design

Cluster-randomized controlled trial

Primary study design

Interventional

Secondary study design

Cluster randomised trial

Study setting(s)

Other

Study type(s)

Prevention

Participant information sheet

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

Health condition(s) or problem(s) studied

Oral health in care-home residents

Interventions

Three workstreams (WSs) are proposed. WS1 will be a two-arm cluster-randomised controlled trial, with a 3-month internal pilot. Recruitment will be a two-stage process. The first stage will be the recruitment of the care homes. The second stage of recruitment is for dentate or partially dentate residents of the included homes.

This is a cluster randomised trial and will be conducted in 40 care homes in England, Northern Ireland and Wales. They will be randomised (via N Worth CTU) based on a 1:1 ratio (20 intervention and 20 control). Stratification of care homes will be based on the following factors care home site (England, Northern Ireland, Wales) and care-home size (based on the number of available beds within the home: small 1-10 beds; medium 11-49 beds; large 50+). The researchers will seek to balance these factors a priori using N Worth's dynamic adaptive algorithm (<http://nworth-ctu.bangor.ac.uk/randomisation/index.php.en>) and will adjust for these factors post-hoc as part of the analysis.

The intervention consists of:

1. Professional application of fluoride (2.2% NaF varnish) every 3 months
2. Prescription of 5,000 ppm fluoride toothpaste (should active coronal or root caries be detected at baseline)
3. Oral hygiene advice
4. Recommendation of the Eatwell Guide

On entry into the study, residents will complete the Six-item Cognitive Impairment Test (6-CIT) in order to assess their level of cognitive function. In order to be as inclusive as possible, all residents that are able to provide consent will be included in the study, but a record will be kept of their 6-CIT scores. A log will be kept of residents who decide not to participate (explored in WS2) and the number of residents who were unable to provide consent.

WS2 will run alongside WS 1 to undertake a process evaluation of the trial. The researchers will use semi-structured interviews with residents, staff, managers, D-Ts, DNs and informal carers to assess the intervention's acceptability. Managers and residents that refuse participation will also be interviewed, to explore their narrative. The sampling frame will account for geographic differences, care-home size, staffing ratios and proportion of residents with severe cognitive impairment. They will also interview Chief Dental Officers, dental commissioners, Directors of the CDS and high street dentists.

WS3 will be a cost-effectiveness analysis from an NHS perspective and examine potential long-term costs and benefits.

Intervention Type

Behavioural

Primary outcome measure

Plaque coverage measured using the Silness & Loe plaque index measured at baseline, 6 and 12 months

Secondary outcome measures

1. Oral health measured using bleeding on probing at baseline, 6 and 12 months
2. Pain measured by asking the participating resident if they have experienced any episodes of sensitive teeth, episodes of toothache or abscess or swelling in the mouth (no = healthy, yes = adverse event – mild, moderate or severe) at baseline, 6 and 12 months
3. Oral health-related quality of life using the OIDP at baseline, 6 and 12 months
4. Health-related quality of life using EuroQol's five dimensions (EQ-5D5L) at baseline, 6 and 12 months
5. Episodes of unscheduled care reported weekly by care home staff and at baseline, 6 and 12 months by researchers
6. New coronal and root caries lesions reported weekly by care home staff and at baseline, 6 and 12 months by researchers

Overall study start date

05/08/2018

Completion date

30/09/2025

Eligibility

Key inclusion criteria

Care homes:

1. Care homes are expected to have a minimum of ten residents over the age of 65 years

Residents:

1. Over the age of 65 years
2. Dentate or partially dentate (at least six natural teeth)
3. Full-time resident in a care facility

Participant type(s)

Other

Age group

Senior

Lower age limit

65 Years

Sex

Both

Target number of participants

Planned Sample Size: 280; UK Sample Size: 280

Total final enrolment

327

Key exclusion criteria

Care home:

1. High-dependency units
2. Current participation in TOPIC, Gwên am Byth or other oral health programme
3. Care-homes that specialize in end-of-life or palliative care

Residents:

1. Residents who are receiving end-of-life or palliative care

Date of first enrolment

01/09/2021

Date of final enrolment

11/10/2024

Locations

Countries of recruitment

United Kingdom

Study participating centre

To be confirmed

United Kingdom

-

Sponsor information

Organisation

Bangor University

Sponsor details

c/o Dr Huw Roberts

College of Human Sciences

Bangor

Wales

United Kingdom

LL57 2DG

+44 (0)1248 383136

huw.roberts@bangor.ac.uk

Sponsor type

University/education

Website

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

ROR

<https://ror.org/006jb1a24>

Funder(s)

Funder type

Government

Funder Name

NIHR Evaluation, Trials and Studies Co-ordinating Centre (NETSCC)

Results and Publications

Publication and dissemination plan

The researchers are in the process of writing up a protocol paper. They will publish the results of the trial in Gerodontology and the Journal of Dental Research. They will also disseminate the results at the ECG, the International Association of Dental Research and the British Association for the Study of Community Dentistry (the latter with the PPI group). The results of the study will also be used to influence the ongoing NHS dental contract reform process in Wales. The results will also be relevant for Local Authorities in England and align with the recent guidance from PHE.

The team will also hold a participatory workshop at the end of the study, bringing together key policy-makers and participating care-homes and representatives of commissioning bodies and practicing dentists and DCPs. Further collaborative links have been formed with the Regulation and Quality Improvement Authority (RQIA) (<https://www.rqia.org.uk/>). This is the independent body responsible for monitoring and inspecting the availability and quality of health and social care services in Northern Ireland, including care homes, and encouraging improvements in the quality of those services. The researchers will also invite the RQIA, CQC and Care Inspectorate Wales to the participatory workshop

The results of the study will also feed directly into an educational programme, supported by infrastructure funding from the Chief Dental Officer, which aims to promote the greater use of DCPs in Welsh service provision. The Faculty is developing within-role and across-role skills-escalators for DCPs and building a programme of mini-Massive Online Open Courses to support a new DN role (linking to non-dental health professionals). The key element of this role will be to work in care homes and so the results from this study will inform this process directly. This will ensure that the results can directly influence policy decisions about the future workforce.

The research team have strong links with ENRICH-Cymru in Wales (<https://www.swansea.ac.uk/enrich-cymru/>) (e.g. VOICE) and Care Forum Wales (<https://www.careforumwales.co.uk/>), which represents over 450 care-homes, nursing homes and other independent health and social care providers across Wales. As highlighted on their website, Care Forum Wales actively share best practice and resources. The research team will also utilise existing relationships that have developed with a number of other organisations in Wales, including the Centre for Ageing and Dementia

(<http://www.healthandcareresearch.gov.wales/centre-for-ageing-and-dementia-research/>) and the largest third sector organisation in Wales: Age Cymru (<http://www.ageuk.org.uk/cymru/>). In Northern Ireland collaborative links have been formed with Age Sector Platform which

represents a strong unified voice for older people in Northern Ireland (<https://www.agesectorplatform.org/>). It is the charity responsible for the Northern Ireland Pensioners Parliament. Age Sector Platform has a membership of individuals and older people's groups across Northern Ireland, representing approximately 200,000 people. Members of Age Sector Platform contributed to the plain language summary of this document. These networks will complement BELONG (<https://www.qub.ac.uk/research-centres/CentreforPublicHealth/Research/PPIGroup/>) and PARC-Bangor (<http://nworth-ctu.bangor.ac.uk/parc-bangor.php.en>), to ensure strong PPI representation.

Informal dissemination networks will be made by these PPI groups, who will also link to the Patient and Client Council <http://www.patientclientcouncil.hscni.net>), which collaborated on HS&DR 14/19/12. This will ensure the dissemination of information directly to dependent older people and their carers/relatives and care-home managers/staff. The PPI co-applicants will also ensure a strong patient-facing dissemination strategy. Patient-facing materials will be developed (and also produced in an audio format).

Intention to publish date

31/12/2025

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be stored in a non-publicly available repository. Anonymised data will be stored according to Bangor regulations (Bangor server). See <https://www.bangor.ac.uk/planning/InfSecGuid.php.en>

IPD sharing plan summary

Stored in non-publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article	protocol version 3	18/03/2021	18/08/2022	Yes	No
HRA research summary			28/06/2023	No	No