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The value and cost of different forms of oral health information

Submission date 12/02/2018	**Recruitment status** No longer recruiting	[_] Prospectively registered [X] Protocol
Registration date 27/03/2018	**Overall study status** Completed	[_] Statistical analysis plan [X] Results
Last Edited 05/06/2024	**Condition category** Oral Health	[_] Individual participant data

Plain English summary of protocol

Background and study aims

A new system of paying NHS dentists in England is being tested which involves putting patients into Traffic Light categories: 'Red' is high risk, 'Amber' is medium risk, and 'Green' is low risk for dental disease. Currently it is not known whether dentists talk to patients about risk, whether patients find Traffic Light risk information useful, or whether this leads to improved behaviours such as toothbrushing. New camera technology (Quantitative Light-Induced Fluorescence or QLF) is also available which produces vivid images such as highlighting plaque in red. Again, it is not known whether patients appreciate this information and use it to improve brushing. The aim of this study is to find out which form of information on oral health risk patients prefer, and whether there is a difference in how they respond to the information with respect to oral health behaviours such as toothbrushing and dietary habits.

Who can participate?
NHS patients aged 18 and over who are at high/medium (red/amber) risk of poor oral health

What does the study involve?
Participants are randomly allocated to be given either: traffic Light information, QLF photographs or just verbal information by the dentist just after having their check-up. Questionnaire data is collected from patients on tablet PCs, QLF photographs are taken at their next two dental visits, and telephone interviews are undertaken 6 and 12 months later.

What are the possible benefits and risks of participating?
Not provided at time of registration

Where is the study run from?
Four NHS dental practices in the UK

When is the study starting and how long is it expected to run for?
June 2014 to October 2017

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

Who is the main contact?
Dr Rebecca Harris

Contact information

Type(s)
Public

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Additional identifiers

Protocol serial number
17265

Study information

Scientific Title
The value and cost of different forms of information on oral health status and risk given to patients following a check-up in dental practice

Study objectives
The aim of this study is to describe how patients value and respond to information on their oral health status and risk and to compare the value of three different methods for presenting information on patient's oral health and risk (verbal, paper-based traffic light rating, electronic QLF image)

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES Committee North West - Liverpool East, 26/06/2014, ref: 14/NW/1016

Study design
Both; Both; Design type: Process of Care, Other, Qualitative

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Specialty: Oral and dental health, Primary sub-specialty: Other

Interventions
The trial was a three arm, parallel group, pragmatic Randomised Controlled Trial to test patients preferences and willingness to pay for information in different formats. Additionally, the trial sought to determine whether there were any clinical or behavioural differences between the three information formats being tested. Participants were randomised into one of three trial arms:
1. Verbal Only Condition: This constitutes usual care and involves a dentist providing the patient with risk information based on their individual needs verbally (also providing patients with a card with relevant oral health messages highlighted).
2. Traffic Light presentation plus verbal information: In this condition patients will be categorised according to a pre-determined RAG algorithm: Red (high-risk patient), Amber (medium risk patient) or Green (low risk patient). Patients will receive a coloured card, detailing their categorisation (as well as their RAG categorisation explanation), verbal information, and a card highlighting relevant oral health messages.
3. QLF presentation plus verbal information: In this condition, patients will receive a QLF photograph of their teeth (there are two choices of photograph, with the most salient [chosen by the dentist] being presented: either a photograph which shows mature plaque on the teeth or demineralisation of the teeth). Alongside the photograph (as well as an explanation about their photograph), patients will receive verbal information, and a card highlighting relevant oral health messages.

The intervention was given to the patients at visit 1 (V1). There were then two additional practice-based follow ups at around two/three weeks post-intervention (V2, V3) and then around six weeks post intervention. Following this, there were two further telephone follow-up points at 6 and 12 months post-intervention.

Intervention Type
Other

Primary outcome(s)
Willingness-to-Pay (WTP) will be used to quantify patient's preferences for the three forms of information. WTP is recognised as representative of how consumers respond to health care decision making. WTP is measured using a contingent valuation approach (a hypothetical scenario used to elicit preferences from participants) collected at the first visit (the patient's dental check-up appointment)

Key secondary outcome(s))
1. Clinical communication measured by the Communication Assessment Tool (CAT), completed by patients after receiving the risk information at V1
2. Self-reported behaviour change between V1, and 6 and 12 months post-intervention:
2.1. Oral hygiene is measured by self report tooth-brushing frequency, duration of tooth-brushing and frequency of interdental cleaning

2.2. Use of fluoride is measured by self report fluoride toothpaste prescribed by the dentist and fluoride mouth-rinse

2.3. Dietary sugar intake is measured by self report frequency of consumption of sugary foods /drinks and frequency of adding sugar to hot drinks tea/coffee

2.4. Smoking is measured by self report smoking information

2.5. Self-rated oral health status measured using a self report rating scale at V1 and 6 and 12 months

3. Clinical outcomes:

3.1. Basic Periodontal Examination (BPE) collected by dentists concentrating on conversions between codes 1 (bleeding) and 0 (health) between V1 and V2/3

3.2. Plaque Percentage Index (PPI) measured on QLF images (ΔR30) – change between V1 and V2 /3

3.3. Number of tooth surfaces affected by early caries – change between V1 and V2 / 3 measured on QLF images

3.4. Where early carious lesions are present – change in lesion volume (ΔQ) between V1 and V2 / 3 measured on QLF images

Completion date
31/10/2017

Eligibility

Key inclusion criteria
1. Aged ≥18 years
2. High/medium (red/amber) risk of poor oral health
3. NHS patients
4. New patients or regular attenders
5. Any level of literacy

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
412

Key exclusion criteria
1. Less than 18 years of age
2. Vulnerable adults

Date of first enrolment
17/08/2015

Date of final enrolment
05/09/2016

Locations

Countries of recruitment
United Kingdom

Study participating centre
Four NHS dental practices in the UK
United Kingdom
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Sponsor information

Organisation
University of Liverpool

ROR
https://ror.org/04xs57h96

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research

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 datasets generated during and/or analysed during the current study are not expected to be made available due to issues with confidentiality and anonymity .

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	results	06/01/2020	08/01/2020	Yes	No
Results article		06/01/2020	05/06/2024	Yes	No
Protocol article		07/05/2018	09/08/2022	Yes	No
HRA research summary			26/07/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes