Development and piloting of Very Brief Interventions (VBIs) to promote physical activity in the context of NHS health checks

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VBI Programme: rationale

- Only 6% of men and 4% of women meet current PA recommendations for 30mins per day [Health Survey for England 2008].

- NHS Health Checks offer an ideal opportunity to deliver very brief physical activity advice of approximately five minutes to a large proportion of the population.

- Very brief physical activity advice should be relatively easy and inexpensive to implement on a large scale, and a small effect could translate into a significant public health benefit.
VBI Programme: Aims

- To develop and evaluate very brief interventions (VBIs) to increase physical activity that could be delivered by a practice nurse or health care assistant (HCA) in an NHS Health Check (HC) or other primary care consultation.

- Patients aged 40-74, not currently diagnosed with vascular disease or with certain high risk factors (e.g. high blood pressure or cholesterol) already treated by medication.
Overview of VBI Development & Piloting Work

**VBI Development**
- Aims
  - Generate a shortlist of promising VBI.
  - Develop and pilot VBI protocols, training manuals and patient materials.

**VBI Piloting**
- Aims
  - Pilot VBI protocols, training manuals and patient materials.
  - Assess VBI feasibility & acceptability.
  - Select VBIs to test in a pilot trial.

**Pilot Trial**
- Aims
  - Assess VBI feasibility and acceptability and potential efficacy.
  - Select best-best VBI for RCT.

**RCT**
- Aim
  - Estimate cost and effectiveness of best-bet VBI.
VBI Selection Criteria

1. **Effectiveness**: potential to increase physical activity.

2. **Feasibility**: deliverable within 5 minutes and feasible in other respects.

3. **Acceptability**: acceptable to both practitioners and patients.

4. **Cost**: low-cost / cost-effective.
VBI Development
(Identifying & Developing VBI Short-list)
VBI Development: Method

Sources of Evidence Informing Each of the Four Selection Criteria

**Effectiveness**
- Evidence Synthesis
- Scoping Review of BCTs
- Team Discussion
- Expert Consultation (Round 1)

**Feasibility**
- Qualitative Study
- Team Discussion
- Expert Consultation (Round 1)

**Acceptability**
- Qualitative Study
- Team Discussion
- Expert Consultation (Round 1)

**Cost**
- Cost-effectiveness research
- Team Discussion

**VBI Shortlist**

**Expert Consultation [Round 2]**
For each VBI, experts were asked to rate their agreement with Likert items and answer open-ended questions addressing each of the four selection criteria – *effectiveness, feasibility, acceptability* and *cost*. 

**VBI Piloting**

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VBI Development: Results

Four Short-listed VBIs

ALL Interventions Included:
- Physical Activity Assessment;
- PA recommendations;
- Face-to-face discussion;
- Written materials

VBI 1: Motivational
- Benefits of PA
- Ways of increasing PA
- Signposting to local resources, etc.

VBI 2: Action Planning
- Ways of increasing PA
- Planning Activity (What, When, Where, & With Whom)

VBI 3: Pedometer
- 10,000 steps goal
- Verbal instruction to record steps
- Pedometer

VBI 4: PA Diary
- Ways of increasing PA
- Record daily activity
- Compare activity and goals
- Review/set new goals each week
VBI Piloting
(Assessing Fidelity, Feasibility and Acceptability)
VBI Piloting: Method

Participants
- N=68
- Recruited from 2 practices (3 Healthcare Assistants & 1 Nurse)
- Received a Health Check plus one of the 4 VBIs

VBI 1: Motivational
N= 16

VBI 2: Action Planning
N= 17

VBI 3: Pedometer
N=18

VBI 4: PA Diary
N=17

Measures
- Health Check (plus VBI) Recordings [fidelity and feasibility]
- Participant Interviews [feasibility and acceptability]
- Practitioner Interviews and on-going feedback [feasibility and acceptability]
VBI Piloting: Results 1

Fidelity
- Fidelity was quite high and did not differ across the four VBIs.

Feasibility
- All VBIs fitted comfortably into 5 minutes at the end of the Health Check.
- Nurses/Health Care Assistants reported that all VBIs were relatively easy to deliver.

Acceptability
- All VBIs were acceptable to Nurses/HCAs and to patients.
Areas for Improvement

- Nurses / Health Care Assistants often went into ‘telling mode’ rather than asking questions.

- No patient wrote an Action Plan or Set a Goal (Activity Diary) during the intervention.

- Some patients wanted more tips for how to increase their activity.

- Many patients wanted a Follow-up consultation (to have someone ‘checking up’ on their activity).
Selecting VBIs for the Pilot Trial

ALL Interventions Include:
- Physical Activity Assessment;
- PA recommendations;
- Face-to-face discussion;
- Written materials

VBI 1: Motivational
- Benefits of PA
- Ways of Increasing PA
- Signposting, etc.
- Action Planning
- Activity Diary

VBI 2: pedometer
- 10,000 steps goal
- Step Chart & Pedometer

VBI 3: Motivational & Pedometer
- Benefits of PA
- Ways of Increasing PA
- Signposting, etc.
- Action Planning
- Activity Diary
- 10,000 steps goal
- Step Chart & Pedometer

VBI Pilot Trial
(Assessing Fidelity, Feasibility, Acceptability AND Potential Efficacy)
What Have We Learned So Far?

Key conclusions:

- Nurses/HCAs can be trained to deliver 4 different VBIs in 2-3 hours.
- VBIs are acceptable and feasible within a health check.
- Piloting invaluable for the development of feasible and acceptable VBIs.
- Intervention recordings and interviews extremely useful.

Next steps:

- Pilot Trial (Phase 2) is ongoing: effects on objective and self-reported physical activity and process evaluation.
- Deciding which VBI to take forward to the main trial.
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