Exploring the **acceptability** and **feasibility** of implementing **activity monitoring devices** to support physical activity within an **exercise referral scheme**

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Exercise Referral Schemes (ERS) are a common model of physical activity intervention.

Evidence that ERS increase activity in short-term.

Less evidence for long-term maintenance of activity.

- Need for enhanced motivational support to optimise and maintain effects long-term?

- ERS should support transition to autonomous motivation by supporting psychological needs.

Activity monitoring devices provide opportunities to enhance delivery of motivational support.
Exercise Referral in Wales

• In Wales, the National Exercise Referral Scheme is a 16-week programme that runs in all 22 local authorities
• Provides 1:1 instruction and/or group exercise
• Previous RCT found NERS to have significant impacts on physical activity at 12-month follow-up
• Change in physical activity was explained largely by improvement in autonomous motivation
• Building on this previous research to explore whether monitoring devices can help support motivation
The MyWellnessKey device

• Accelerometry-based uniaxial activity monitor

• Components include:
  – Real-time visual feedback via device’s screen
  – Detailed feedback via web platform (MyWellnessCloud) to indicate progress towards goals, time spent at different intensities and calories burned, manually add other activity
  – Automatised goal progression
  – Facilitation of social support with exercise professional and friends

• Can they be implemented alongside usual practice?
WEEKLY ACTIVITY LEVEL

Last mywellness key sync on: 25/01/2016

YOUR WEEKLY GOAL: 210 MOVEs

Add activities and exercises

New activity

Logbook

Aspirations determinate the way people live and move. Discover what makes you move

Workout done @mywellness.com
12 November 2015 12:00
Your have completed the workout <<Free workout>> of 1 exercise - 20 min - 472 MOVEs

mywellness key
12 November 2015
Your mywellness key has been synchronised. Your daily MOVEs are 474
RESULTS
Select the type of result to view

TIME IN INTENSITY
Time in intensity day by day

14-20 OCTOBER 2013

HIGHEST NUMBER OF MOVES ON A BIKE
472 MOVES
12 November 2015

14 OCTOBER
Daily MOVES
1083
Goal
137 min

Low intensity (FREE)
Supporting psychological needs

COMPETENCE
Personal mastery and effectiveness

Feedback on progress towards goals

feedback on goal achievement

AUTONOMY
Volitional and self-endorsed engagement

Self-monitor physical activity

provision of capabilities to self-regulate exercise performance

Mastery-based progression of goals

relatedness
Meaningful interpersonal connections

Remote contact with staff

Group challenges

Share progress via social media

Receive support from NERS staff and friends/family

INCREASED AUTONOMOUS MOTIVATION FOR EXERCISE
PACERS Aims and Objectives

**Aim:** Evaluate the **feasibility** and **acceptability** of the MWK intervention and effectiveness evaluation methods

**Design:** Pilot individually randomised controlled trial with embedded mixed-methods process evaluation.

**Target Population:** Individuals referred into the NERS generic pathway identified as having capacity to use the activity monitors.

**Treatments:** Control (NERS usual practice) and Intervention (NERS + MWK).

**Setting:** Purposive subsample of 8 areas, with variation in population size, level of deprivation, and rurality.
Research Questions

• How **feasible** is it to implement the MWKs in NERS? What are the barriers / facilitators?

• How **acceptable** are the MWKs to NERS participants? What are their experiences of using them and the web platform?

• Is a full scale RCT of the effectiveness of the MWKs warranted?
  – Can enough participants be recruited and retained?
  – Can we measure physical activity objectively?
**Methods**

How **feasible** is it to implement the intervention?
- Intervention ‘delivered as intended’
  - Reports of receipt of intervention
  - Receipt of sufficient instructions
  - Self-reported usage data
  - Interviews re: intervention delivery

How **acceptable** is it to participants?
- At least one of the two intervention components is acceptable to participants
  - Participant-reported usage data
  - Perception of ease of use, likelihood of use, expectations met
  - Interviews re: acceptability and facilitators/barriers to use
Sample

- **156** participants from the generic pathway joined the study
  - 88 MWK
  - 68 NERS usual care
- The participants were representative of the wider NERS population in terms of age and gender
- Interviews conducted with sub-sample at 4wks & 12mths
  - 20 clients
  - 11 staff members
Findings: feasibility of implementation

• How **feasible** is it to implement the MWKs in NERS?
• What are the barriers / facilitators?

**Questionnaire Data:**
- 67% of participants received a MWK who were supposed to
- 94% received enough information to use the MWK
- 38% felt they didn’t have enough information to use the Cloud
- In interviews, some participants talked about not being given any information about how to use the MWK

“They didn’t show me how use it, I got given it at the end of the exercise session and they said well try it and see how it goes so I wasn’t even told how to set it up”
Findings: feasibility of implementation

• How **feasible** is it to implement the MWKs in NERS?
• What are the barriers / facilitators?

**Staff Interview Data:**
- Most felt adequately prepared to deliver MWK to clients
- Being trained and familiar with the MWK system was key
- Some MWK devices had technical issues
- Time was a barrier for some people
- IT issues interfered with the set-up process in some areas
  - **USB connectivity, software download, internet access**
Findings: acceptability of intervention

- **How acceptable** are the MWKs to NERS participants?
  - Most engaged in ‘moderate’ use of the MWK (not in last 3mths)
  - 8.2% were still using at 12-month follow-up point

<table>
<thead>
<tr>
<th>Engagement with intervention</th>
<th>MWK 57%</th>
<th>MWC 46%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention is easy to use</td>
<td>49%</td>
<td>33%</td>
</tr>
<tr>
<td>Likelihood of future use</td>
<td>37%</td>
<td>15%</td>
</tr>
<tr>
<td>Met expectations</td>
<td>57%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- Issues included IT access and **IT literacy**, technical problems, device **design**, understanding how the device worked
Findings: acceptability of intervention

• What are their experiences of using them and the Cloud?

**Benefits of using MWKs**
- Being able to view data on activity completed, graphs etc.
- Reflecting on progress made, ’seeing results’
- Being able to manually add activities on Cloud
- Receiving supportive summary emails
- Intensifies NERS

**Facilitators to using MWKs**
- Having regular access to a computer and the internet
- Being ‘IT literate’ and confident
- Information received on how to use the devices
Findings – overcoming issues

• Attempts made to overcome issues during study:
  – Use of laptops
  – Participants setting themselves up at home
  – Detailed ‘how to’ guide given to participants and staff

• Possible suggestions for the future?
  – More in-depth training, that covers IT issues and solutions
  – Use in other areas of the scheme
    • *E.g. those that don’t come to the gym, use to support remotely*
Conclusions

- **Attempts were made to overcome issues with key, with mixed successes**
  - Not sufficient information to suggest the issues could be overcome without further feasibility testing

- **After considering all quantitative and qualitative data, decision made not to proceed to effectiveness study**
  - Results fed back to NERS national coordinator and commissioners to inform their decision about use of MWK
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