Edinburgh International Conference of Medicine

Past, Present & Future

#PPFEEd16
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The Fallcheck app: innovation in falls prevention

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Presentation overview

• Background

• Overview of the app

• App development and testing

• Implications for using apps in clinical practice
Background

- **Lack of information and knowledge** is a key barrier to falls prevention
- **NICE guidelines (2013)** support home hazard modification as part of a multifactorial intervention for fall prevention
- **Home hazard modification effective when delivered by an occupational therapist** in conjunction with follow up at home (Pighills et al 2011, Costello and Edelstein 2010)
- **Service rationalisation** does not support this delivery.
- People **often not referred** for intervention until after a fall
Questions???

• How could we reach people with information in a different way before they had a fall?
• How could we utilise a wider family and multigenerational approach to fall prevention?
• How could we provide information about low tech solutions to falls prevention to promote self management?
• Increase awareness of telecare within falls prevention?
Older people and technology

• Two thirds (66%) of UK adults have a smart phone (Ofcom 2015a)
• Over 50s fastest growing group (Deloitte, 2014)
• 55-64yrs ownership more than doubled since 2012, from 19% to 50% (Ofcom 2015a)
• 67% of over 55s and 38% of over 75s have access to internet at home (Ofcom 2015b)
Fallcheck app
www.coventry.ac.uk/fallcheck

- Aimed at reducing the risk of falls
- Comprehensive guide on how reduce potential fall hazards in the home
- Based on information from Occupational Therapists (HOMEFAST McKenzie et al 2000, 2002), falls and telecare experts
- Information on how to reduce or remove the risk is included
- Examples of low and hi tech assistive technology solutions provided
- Advice on other aspects of fall prevention and further sources of information

Free to download
Fallcheck app available at:
www.coventry.ac.uk/fallcheck
Fallcheck app

The House
- General
- Accessing The Home
- Stairs & Hallway

Living Room
- Dining Room
- Bedroom
- Kitchen
Fallcheck app

- Kitchen
  - Floor
  - Cupboards
  - Appliances
  - Pets
  - Meal Preparation

1. Is the floor slippery?

Spills on floor surfaces are hazardous and can cause falls.

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Fallcheck app

Checklist Quickview
click for solutions

- Floor (Kitchen)
- Flooring (General)
- Lighting (General)
- Bed (Bedroom)

Hazard

1. Check for trailing bed clothes on the floor. This can be a trip hazard and increases the risk of falls.
2. Is the bed too low?
3. Is the bed too soft?

This makes the person at risk of being

difficulty bending to pick up items from the floor.
3. Consider buying an alternative mattress or bed.
4. Bed raisers can be fitted to the bottom of the bed to make it higher.

You might need advice on the most appropriate equipment. An occupational therapist can provide advice; contact your local social services department.

Additional Resources

These are external websites that will appear in a new browser window/tab.

The Gadget Gateway
Bed Raiser

Remove from checklist

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Usability testing
Health and social care professionals

- Download to own device
- 2 week test
- Online survey (Bristol Online Survey)
- Based on the 30 point USE Questionnaire (Lund 2001)
- Likert scale & open response
- App star rating (Boudreux et al. 2014)
App development – usability results

- “As we move into an age where information is increasingly delivered via digital mediums, this is an excellent way of getting information to the target audience”

- “Its simplicity is a key feature, ease of use”

### Health App Evaluation

**About This App**

- Updated: 06/12/13
- Current Version: 1.0
- Requires Android: IOS/Android
- Category: Health
- Installs: 27
- Size: N/A (Web based App)

**Ease of use**

- It is user friendly: ★★★★★
- It requires the fewest steps possible to do what I want to do with it: ★★★★★
- I did not notice any inconsistencies when I used it: ★★★★★
- It does everything I would expect it to do: ★★★★★
- I can use it successfully every time: ★★★★★

**Usefulness**

- It is useful: ★★★★★
- It meets my needs: ★★★★★
- It saves time: ★★★★★
- I could use this in my job: ★★★★★
- It would help someone to identify falls risks in the home: ★★★★★
- It meets the needs of those at risk of falling: ★★★★★

**Ease of learning**

- ★★★★★

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User testing

- CU pump prime grant
- Phase 1: 44 carers and people worried about falling: Download the app, online survey and telephone interview
- Phase 2: 15 users “Think aloud” study – cognitive walk though technique (Olmsted-Hawala 2010)

“Being the first app I have used I was amazed at its comprehensive coverage and ease of use. It amazed me in the best possible ways. Thank you”. 78 year old, male.
Implications for apps in practice

- How does this tool help achieve our goals?
- What does it offer that is better than traditional approaches?
- How and where is the app integrated into the care pathway?
- Are the staff digitally literate? Can they use the app?
- How is the app distributed/recommended to users?
- How is use of the app evaluated? Are apps any more effective than traditional interventions?
Public Health Impact
Resources and References

The app is freely available at the following website: www.coventry.ac.uk/fallcheck


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