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GOODWIN, Victoria, DULAKE, Nick <<http://orcid.org/0000-0003-1841-5848>> and LANGLEY, Joe <<http://orcid.org/0000-0002-9770-8720>>

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Vertebral fragility fractures: co-designing solutions to promote independence and quality of life based on the needs of service users

Victoria Goodwin, Nick Dulake, Joe Langley

Introduction

Vertebral fragility fractures (VFF) affect one in six women and one in twelve men during their lifetime, costing the UK NHS more than £133 million each year (without considering medication). Pain as a result of VFF can last up to 2 years, with up to 20% having another VFF within a year. They impact on ability to do everyday activities, such as getting washed and dressed as well as stopping people going to work, often because people are afraid to move.

The aim of this study was to utilise a co-design approach with people living with VFF to identify areas of unmet need and establish whether proof of prototype devices could be co-created that addressed those needs.

Methods

A participatory and iterative approach was utilised involving ten people with osteoporosis or VFF, plus carers, physiotherapists, **industrial designers**, design engineers and researchers in a series of workshops.

Results

In workshop one, we immersed ourselves in the lived experiences of people with VFF, carers and physiotherapists. A series of creative activities captured these experiences visually, physically and emotionally and statements of need were defined. In the second workshop, creative activities were undertaken to generate ideas and concepts, moving from two dimensional to three dimensional visualisations. We are currently in the process of converting these visualisations into concept artefacts. The final workshop (May 2017) will develop 'brand and marketing material' for each artefact that will be promoted to a 'Dragon's Den' panel of key stakeholders.

Conclusion

People with VFF report that services and support (including equipment) do not particularly meet their needs. As a diverse group of patients, carers, **designers**, engineers and researchers, we were able to develop prototype solutions with supporting materials that could be further developed and tested. We plan to use this work to underpin the development of a future grant application in 2017.

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