

**Empathetic design research and development in practice;  
co-development of an innovative head and neck support  
for people with Motor Neurone Disease**

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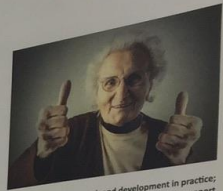
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## Empathetic design research and development in practice: co-development of an innovative head and neck support for people with Motor Neurone Disease

People with Motor Neurone Disease (MND) experience muscle weakness. The human head can weigh 1kg so when this happens in the muscles around the neck it can become very difficult to hold the head in an upright position to the head falling forward.

The shoulder can lead to extreme pain, restricted movement, problems with eating, drinking, swallowing, breathing and respiratory adversely affect face to face communication. A neck collar would help alleviate these important quality of life (QoL) issues. Current neck collar products can be impractical for people with MND and are regularly rejected by users as often they are designed to immobilise the head and neck and can be socially embarrassing.

A fundamental re-evaluation of the way these physical products are configured and used is required. The project explored the use of open and emergent approaches to the co-development of a better and better product design over an iterative and explorative of multiple multidisciplinary, social and QoL issues. It demonstrates ways of working openly together using a range of user research methods to arrive at holistically considered optimum solutions.

The project was funded by the Wellcome program. The team consisted of clinicians, engineers and designers working with partners including people experiencing MND and their families. The project included a range of research through design methods at the heart of the design process. Through this a range of research through design methods at the heart of the design process. Through this a range of research through design methods at the heart of the design process.



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Empathetic Design  
Research and  
Development in Practice  
Co-development of an Innovative  
Head and Neck Support for  
People with Motor  
Neurone Disease (MND)

Dr. Sarah-Jane Adams  
Dr. Sarah-Jane Adams  
Dr. Sarah-Jane Adams

Table with 5 columns and 1 row of items:

- White notebook with a red pen
- Black cylindrical object
- White pen
- White pen
- White pen

Table with 1 column and 1 row of items:

- Black neck support device with white trim and black straps