

Chronic pain sufferers living rurally benefit from technology

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New technology to help chronic pain sufferers in rural areas manage their condition is being investigated by Scottish scientists.

An estimated 73% of older people in the UK suffer from [persistent pain](#) that lasts longer than three months and is difficult to treat.

Sufferers living rurally often have limited or no access to specialist pain services due to their [geographical location](#).

Experts from the University of Aberdeen and UHI, the prospective University of the Highlands and Islands* are leading the development of a device to enable people in this situation to manage their condition independently.

The technology would provide advice and support on, for example, exercises or activities to alleviate chronic pain.

Scientists envisage the technology could be integrated into an appliance commonly found in the home - such as a television or telephone — to make it technically and physically simple for older people to use.

They are also investigating how the device could incorporate an element of social interaction with others, as studies have closely linked chronic pain with depression and poorer emotional wellbeing.

The three year project brings together experts in health and computing science working together within dot.rural- the Research Councils UK (RCUK) Research Hub at the University of Aberdeen which is investigating how digital technologies could transform rural communities, society and business.

Dr. Pat Schofield, Director for the Centre for Advanced Studies in Nursing at the University of Aberdeen who has worked in pain management for over 20 years said: “The UK population as a whole is ageing and as a consequence we are likely to see an increase in incidents of chronic pain. It is suggested that the impact of pain upon quality of life among older adults is high, and is felt more acutely by those living in rural and remote areas who have limited or no access to specialist pain services.

“This, combined with difficulties in providing health and social care services across vast geographical distances, creates a major challenge for

the NHS and local government.

“Increasingly they are looking to new technologies to meet this challenge.

“The device we are envisaging would help older people in rural areas living with chronic pain by giving them support and advice on, for example, the exercise and activities they can do or the correct way they should be sitting so as not to aggravate their condition.

“One of the greatest fears for an older person living in a remote location is that the introduction of technology in their health treatment will result in losing the social interaction they gain from one-to-one visits from health or social care professionals.

“Studies also show that depression and poorer emotional wellbeing are linked closely with chronic pain, and there is the potential that this could be further emphasised for those living in more isolated circumstances.

“As part of the research process we will assess the extent, nature and value of personal and social interaction for those living with chronic pain in remote parts of the country. These findings will then feed into the technology we develop.

“Our aim is to create a device which retains rather than removes personal and [social interaction](#) with others — and we’ll look at how, for example, web cam or teleconferencing technology could be integrated into what we create to achieve this.”

Researchers plan to engage with older people living with chronic pain in rural communities who would input into the design of the technology and test prototypes through its various stages of development.

They will also work closely with NHS, social services and community based care providers who provide health and social care services in remote and rural areas.

Dr. Gaener Rodger, Senior Research Fellow in Rural Health Economics at the Centre for Rural Health — a collaborative venture between the University of Aberdeen and UHI Millennium Institute - said: “In the development of a prototype, it is paramount that we take into account the capabilities of those who will be using the device and create something which is both technically and physically simple to use.

“[Chronic pain](#) sufferers often face mobility challenges, so it is important to consider this when thinking about the size and style of the device.

“Also cognitive function may decrease in older people which can create a barrier in the uptake of new technology within this group.

“For this reason, we will investigate how the device we develop could be integrated into or added onto a household appliance already found in most homes such as a television or telephone, which people already know, understand and feel comfortable using.”

Provided by University of Aberdeen

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