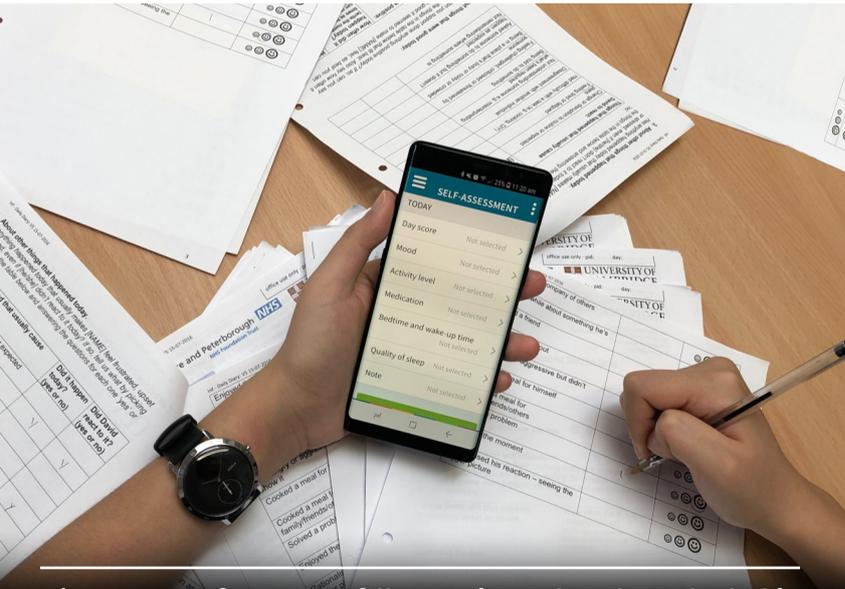


CLAHRC BITE

CLAHRC EoE BITE no 33

January 2019

A bite-sized summary of CLAHRC research: A smartphone app and wearable device



Why?

Aggressive behaviours are a major concern for many people referred to clinical services for support. In order to understand these behaviours and plan and monitor interventions, it is often helpful to collect different kinds of information. However, current methods are demanding.

What? The data collection system works through a smartphone app and a watch. We are developing and refining the system through collaborations with people whose aggressive behaviours are of concern to them and to others, and with their families and support workers.

Who?

Supported by the CLAHRC EoE, researchers at the University of Cambridge formed a partnership with a health technology company to collect and integrate information more easily.

'Yet more forms to fill - can't technology help?'

A new system for collecting data on aggressive behaviours

Background

Aggressive behaviours are very common in society, but they are particularly frequent in people referred to clinical services. The psychological, social, and financial impact on the person themselves and their families and/or support workers is often significant. In order to better understand these behaviours and develop and evaluate interventions, we often need to collect different kinds of information over long periods of time. This is frequently difficult and time-consuming.

The research

Researchers have partnered with a mental health technology company to support the process of collecting information. A smartphone app developed by Monsenso can be used to collect information about behaviour and well-being and link it to data about heart-rate, sleep, and activity obtained through a Nokia watch. The combination of technologies has the potential to improve our understanding of aggressive behaviours and for planning and evaluating interventions.

Modifications to the interface of the app and the data collection system are being carried out in collaboration with potential users including people with learning (intellectual) disabilities and/or autism spectrum conditions, or acquired brain injuries, their families and support workers to ensure that data collection is both feasible and acceptable.

We anticipate that apps and wearable technologies will improve over time. It is important that health service researchers form partnerships with relevant companies to ensure that their products can be used to benefit people with complex needs, their families and other supporters.

References

- Freimer, N. B. and Mohr, D.C.(2019). Integrating behavioural health tracking in human geneticsresearch. Nature Reviews Genetics, 20, 129-130
- Kupferschmidt, S. (2016). Assessing challenging behaviour: How technology can help. Behavior Analysis Quarterly, 2 (4), 1-3
- Marcu, G., Tassini, K., Carlson, Q., Goodwyn, J., Rivkin, G., Schaefer, K.J., Dey, A.K., & Kiesler, S.B. (2013). Why do they still use paper?: understanding data collection and use in autism education. In: Proceedings of the 2013 SIGCHI Conference on Human Factors in Computing Systems, 3177–86, ACM Digital Library (www.dl.acm.org)

What is NIHR CLAHRC East of England?

The National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care (CLAHRC) East of England is a five year programme of applied health and social care research which focuses on the needs of people with complex problems, often vulnerable, when multiple agencies are involved in their care: young people, frail older people, those with dementia, learning disabilities, acquired brain injuries or mental ill health.

The CLAHRC East of England collaboration encompasses some thirty-six organisations, with research hubs in the Universities of Cambridge, Hertfordshire and East Anglia working closely with individuals and organisations involved in the whole care pathway.

Service users and carers are at the heart of what we do, in parallel with an ambitious public health research programme.

Co-production and collaboration at all stages of the research process are fundamental to making a positive impact through applied health research.

For more information about the study:

www.clahrc-ee.nihr.ac.uk/2018/09/proof-of-concept-study-of-vagus-nerve-stimulation/

Contact Prof. Tony Holland: ajh1008@medschl.cam.ac.uk.

We are grateful to our partner Monsenso

<https://www.monsenso.com/>



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