



Are Digital Clinics the Future of Persistent Pain Treatment?

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ABSTRACT

The societal and economic burden of chronic pain has been increasing in recent years, with a 2018 British Pain Society study estimating 8 million adults in the UK to be suffering from moderate to severely disabling chronic pain. The ongoing COVID-19 pandemic has exacerbated this issue, with massive increases in treatment waiting times and an increase in prevalence of persistent pain observed. As a result, the problems associated with chronic pain treatment mentioned earlier have only been further exacerbated by the ongoing COVID-19 pandemic. Recent rapid advance in technology have led to the emergence of digital clinics, an alternative healthcare delivery method. Several studies have shown the effectiveness of digital clinics on reducing waiting times, patient costs and increasing satisfaction levels. A survey conducted by Leva Clinic, UK's first CQC registered, fully research-led, centralised, digital and MDT led chronic pain clinic provided some insight into patient's views of treatment provided by digital pain clinics. Whilst feedback from patients and other studies have shown digital clinics to be a viable alternative of traditional clinics, it brings its own set of advantages and disadvantages. It is therefore paramount that clinics consolidate various aspects of current pain management practice and bring together MDT members to a single point of access to provide patients with treatment that unites the advantages of traditional and digital clinics. It is our hope and goal that with proper regulation and management, digital clinics should support reducing the global burden and prevalence of chronic pain.



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EDITORIAL

Chronic, long-term, ongoing or persistent pain has an increasing societal and economic burden. The 2016 Global Burden of Disease Study listed pain as the leading cause of disability worldwide [1]. A 2018 study conducted by the British Pain Society estimates 8 million adults in the UK to be suffering from moderate to severely disabling chronic pain, with back pain alone accounting for 40% of sickness absence in the NHS and an overall cost of £10 billion to the UK economy [2].

In addition to the high prevalence amongst the population, people who live with pain also have the largest rate of morbidity globally, as measured by the number of years living with disability. A survey of people living with chronic pain in Canada attending Multidisciplinary Pain Treatment Facilities showed that nearly 66.67% experienced pain leading to a substantial decrease in quality of life and ability to function, with 34.6% reporting suicidal thoughts and 50% facing severe or extremely severe levels of depression [3]. Additionally, a NICE report has revealed nearly half of people with (chronic) pains in the UK have been diagnosed with depression, with two-thirds unable to work outside of their homes [4]. Indirect costs of pain include absenteeism, reduced productivity, disability benefit claims, as well as patients leaving the workforce [4]. Digital pain clinics could be a useful method of addressing this issue.

The ongoing COVID-19 pandemic has resulted in an increase both the number of chronic pain sufferers as well as non-essential treatment waiting times. Currently, record numbers of patients have waited more than 18 weeks for treatment, resulting in knock-on effects to distress levels, families, jobs and the economy [5]. This is due to the loss and diversion of resources due to the pandemic [5]. Additionally, the multisystem nature of the disease resulted in an estimated 14–77% prevalence of chronic pain after ICU discharge [6]. The recent NICE rapid guidelines for COVID-19 management also listed pain as a symptom of long COVID that should be treated with a multidisciplinary approach [7]. As a result, the problems associated with chronic pain treatment mentioned earlier have only been further exacerbated by the ongoing COVID-19 pandemic.

The current gold standard of care for patients suffering from chronic pain is care in a specialist pain unit with a multidisciplinary care team of doctors, nurses, psychologists and physiotherapists. NICE guidelines recommend a treatment plan including physiotherapy, psychological therapy. Additionally, a recent revision of NICE guidelines suggests reducing the use of pharmacological interventions such as opioids and gabapentanoids in chronic pain treatment [8, 9].

Recent rapid advances in technology have led to the emergence of an alternative healthcare delivery method, digital clinics. Digital clinics also provide the opportunity for patients to participate in supportive person-centred services such as peer support groups, links to charities,

social prescribing services and wellbeing programmes, all of which are linked with improved patient outcomes. In parallel with new forms of care delivery, digital clinics offer potential to improve data analysis and the potential for even more personalised therapeutics and treatment (in line with NICE and research-led recommendations).

Several studies have been performed on the effectiveness of digital clinics. A review of the effect of telehealth interventions on waiting times for various specialties in Australia showed a 38–88% reduction for dermatology, 16–48% for ophthalmology and 89% for otorhinolaryngology [10]. Additionally, a Canadian study comparing in-person vs. telemedicine consultations for chronic pain treatment showed lower average direct patient costs and higher satisfaction levels [11].

Unpublished data from a recent survey conducted by Leva Clinic, a Care Quality Commission (CQC) registered, fully research-led, centralised, digital and MDT led chronic pain clinic, provided some insight into patients' views of treatment by digital pain clinics. Two hundred and eighty-one patients answered and the greatest majority have feedbacked that the provision of online digital clinics have allowed them to access care and attend clinics where they previously could not due to issues such as anxiety, family factors, location, as well as travel or work constraints. Patients appreciated the flexible nature of digital clinics which allowed them to still seek medical treatment where it would have not been possible in traditional clinics. This is in keeping with the results from the Canadian study [11].

Additionally, when asked what aspect of their multidisciplinary treatment (consisting of doctors, physiotherapists and clinical psychologists) had helped patients manage their symptoms the most, 33% rated medical consultations to have the most impact, followed by mental health support (31%), and then physiotherapy (21%). The relatively even spread of responses across the board suggests that all aspects of multidisciplinary, patient-focused treatments play an important role in patient recovery. This is further supported in a subsequent question which asked patients if they found physiotherapy, yoga, hydrotherapy, counselling, osteopathy and/or chiropractor beneficial. In that instance, more than half of the participants responded that they found the treatments helpful.

Many patients, however, had mixed reviews to group therapies. While many found group therapies useful in learning skills to better manage their symptoms, a vast majority of respondents felt that group sessions were held in negative or competitive environments, and that the large age gaps within the patient cohort in certain sessions made them feel isolated and unable to relate to each other. While this highlights areas of digital clinic treatments that could be improved, it also shows the potential benefits that can be achieved with further understanding and finetuning of the offered treatments.

In conclusion, digital clinics have shown to be a viable alternative to traditional clinics that brings in its own sets of advantages and disadvantages. However, patients suffering from chronic pain stand to benefit from the additional option of digital clinics when seeking treatment. Clinics such as Leva Clinic that consolidate aspects of current pain management practice and bring together MDT members to a single point of access for the patient may be able to bring together the best of both worlds. The digital aspect of the clinic allows patients to receive convenient, coherent and coordinated care, while an MDT-driven clinic ensures patients receive optimal and tailored treatment, with the additional benefit of greater patient confidence in treatment plan due to interdisciplinary collaboration [12]. With proper regulation and management, digital clinics should support reducing the global burden and prevalence of chronic pain.

COMPETING INTERESTS

ZZL is a medical student who led the writing of this paper with input from AS, AF, CJ, DD, HS, JS, JOS, PK undertake paid consultancy work for Iaso Ltd (Trading as Leva Clinic) as part of the data acquisitions for this paper. MM, BVDL and SM are employees of Cellen Life Sciences Ltd. Mala Mawkin is a member of the editorial board for *International Journal of Digital Health*, which is on a voluntary basis. All other authors have no competing interests.

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