



Research Article

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Virtual Clinics: Descriptive Survey of A Sample of Models Used Within Orthopedics in The United Kingdom

Racheal Duncan, Cerys Watcyns, and Lindsay Smith*

University of the West of England, UK

*Corresponding author: Lindsay Smith, Faculty of Health and Applied Science, University of the West of England, UK.

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Abstract

Objectives: To gain a snapshot of the models of virtual orthopedic clinics currently in use within the United Kingdom through data collected from non-medical healthcare professionals. Information collected included types of patients referred, staff members involved, facilities used, methods of follow up, benefits and challenges.

Method: A short online survey, collected quantitative data from non-medical healthcare professionals affiliated with two recognized professional bodies who were directly involved or had knowledge about virtual clinics.

Results: Responses were received from 11 virtual clinics. The majority of individuals involved were physiotherapists (73%) with 27% overseeing them. Most clinics were conducted Monday-Friday (45%) in an office space (73%), using a computer, desk, and telephone (91%), with referrals mainly coming from orthopedic services (54%) and Accident and Emergency (54%).

Conclusion: The results of this survey provide an insight into orthopedic virtual clinics in the UK prior to the COVID-19 pandemic. Although missing from previous research, there is evidence to show the involvement of physiotherapists in addition to other non-medical healthcare professionals. Equipment needed for set up is minimal and benefits include patient satisfaction, efficiency, and the ability to meet orthopedic guidelines.

Keywords: Virtual clinics; Orthopedics; Physiotherapy; Survey

Background

The National Health Service (NHS) is currently over stretched and over-burdened [1,2] with an ongoing challenge to match capacity to demand [3]. The number of outpatient clinic appointments is growing, leading to delays, dissatisfaction, and non-compliance with national guidelines [4]. With rising pressures on primary care, the NHS Long Term Plan (2019) supports the development of digitally enabled services to replace the unsustainable growth of current outpatient care, with the aim to reduce unnecessary face-to-face (FTF) appointments [5]. Virtual clinics (VCs) are one way of achieving this goal, and have been deemed safe, cost-effective, and associated with high levels of patient satisfaction [3,6-8].

While the use of VCs in orthopedics has become increasingly popular over the past decade, literature surrounding the topic is scarce. Research has primarily focused on virtual fracture clinics (VFCs) replacing traditional FTF fracture pathways [7-9] with some mention of joint arthroplasty follow-ups being replaced by virtual orthopedic clinics (VOCs) [4,10-12]. King D, et al [13] report that VCs should be considered as one part of the musculoskeletal pathway but that the paradigm for delivery is still evolving.

Although guidelines and protocols provide a framework for professionals to follow and recommendations of how healthcare should be delivered [14], to-date, there are no standards pertaining

to how VCs should be organized. Having acknowledged a gap in the literature, the aim of this study was to explore existing models of VCs currently in use in orthopedics in the UK.

Method

This was a descriptive survey, collecting quantitative data from non-medical healthcare professionals (HCP) working within orthopedics, about the models of VCs currently in use across the UK. The online survey comprised of seven questions, and sought information relating to; types of patients/staff involved, facilities used, frequency of clinics, follow up methods as well as a chance to gain an insight into the benefits and challenges that VCs pose for HCP. The survey received ethical approval (University of the West of England, Bristol REC Reference No: HAS.20.01.107, 7th February 2020) and was disseminated nationally via email to 500 members of the Association of Trauma and Orthopedic Chartered Physiotherapists (ATOCP) and 61 members of the Arthroplasty Care Practitioner's Association (ACPA) [15]. The survey remained open for four weeks, with data analyzed thereafter.

Results

Responses were received from 11 clinics and data provided a snapshot of orthopedic VCs immediately prior to the COVID-19 pandemic. The clinics did not involve patient contact but were constructed to review medical records and imaging results plus other diagnostic tests to facilitate a decision about further treatment. Clinics were staffed by advanced practice physiotherapists and/or advanced practice nurses; other staff included orthopedic consultants (4 clinics) and administrators. Frequency of clinics varied from once a month to every weekday; dedicated office space was available for some VCs, but the majority used shared office space. The essential equipment included a desk, computer, and telephone. Referrals to the orthopedic VCs were from primary care, emergency departments, minor injury units and secondary care. Patients were excluded if their condition required surgery or admission to hospital; one response indicated that those with hearing problems were excluded. Follow-up information was offered to patients through a mixture of letter, email, telephone, and pre-printed leaflets. No patients were contacted by video-call. Benefits listed were speed and efficiency, avoidance of hospital visits, patient satisfaction, and the ability to meet targets. While challenges included the administrative burden, access to medical records, quality of radiographic images, staff training, appropriate referrals, and the time taken to implement decisions and contact patients after the VC.

Discussion

In our study, physiotherapists played a key role in the operation of VCs in eight cases (73%) and were overseen by physiotherapists in the remaining 27%. This is in contrast with the current body of literature whereby a majority of VCs are run by a consultant and a nurse specialist. The majority of participants in this study listed various minor soft tissue injuries and fractures within their inclusion

criteria. One of the exclusion criteria stated by the participants was hearing problems. This emphasizes a need to adapt communication methods within VC's to ensure care is provided to a broader patient group.

A strength of this survey was that it attempted to gather information lacking in current research such as the frequency of clinics. The study revealed that the majority of VC's operate during weekdays (45%) with 27% operating 2-4 times a week. Most respondents of the survey used a shared or private office which implies that VC's are well established within these trusts and that HCP's are convening together to conduct these clinics. Assuming that space was not an issue, a VC would be a cost-effective addition to most trusts' services as already well documented in the literature. Current literature suggests that patients are mainly followed up by a telephone call [9,16]. This is in contrast with our study whereby the majority of patients received a letter by post.

The findings of this study are similar to the findings of other research conducted into VCs in that the majority of referrals were reported as coming from the Emergency Department, orthopedic services, and the general practitioner. Some benefits of running a VC were reported as efficiency, patient satisfaction and patients being streamlined to the appropriate specialist. Challenges included contacting patients by telephone, administrative support, and the referral of inappropriate patients.

Limitations

The limited response rate of the survey decreases the generalizability and therefore reduces the external validity of the study. This may have been due to VC's being less common in practice or the target community not being responsive to electronic survey's and time-poor with winter pressures on service delivery. In addition, towards the end of data collection saw the outbreak of the Covid-19 pandemic which would have impacted on respondents' capacity to complete the questionnaire.

Future research should consider the incorporation of multiple professions involved within orthopedics thus enabling a more reflective target population. In addition, the development of an evidence-based framework enabling the provision of consistent guidelines would ensure the continuity of high-quality care and improved patient outcomes.

Conclusion

In a culture where delivery of care by virtual methods is rapidly evolving, this survey has given some insight into orthopedic VCs in the UK prior to the COVID-19 pandemic, and the results provide evidence for the involvement of physiotherapists in addition to other non-medical health professionals, a detail missing from previous research. Equipment and facilities needed are minimal, equating to a low-cost set-up and the benefits of efficiency, patient satisfaction, and the ability to deliver care in accordance with orthopedic guidelines are consistent with existing literature.

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Conflict of Interest

No conflict of interest.

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