Can tele-rheumatology improve rheumatic and musculoskeletal disease service delivery in sub-Saharan Africa?

We note with great interest the paper by Costa et al., who submits that telemedicine has emerged as a key tool for managing psoriatic arthritis (PsA) among patients in Italy during the COVID-19 pandemic. The WHO has emphasised that universal health coverage cannot be achieved without the support of e-health of which telemedicine is a subset. In sub-Saharan Africa, there is a dearth of rheumatologists. Rheumatology services are mostly centred in urban tertiary academic hospitals despite the greater rheumatic and musculoskeletal disease (RMD) burden in rural communities. In an attempt to link technology and healthcare in the region, innovative tools for electronic data capture and clinical decision support have been developed with varying degrees of success.

Telemedicine (also used interchangeably with telehealth) can be defined as the use of medical information that is exchanged from one site to another through electronic communication to improve a patient’s health. It has wide use in radiology, dermatology and psychiatry. Its usage in specialties like rheumatology (tele-rheumatology) appears to be increasing. Different telemedicine services exist. These include teleconsultation (synchronous or asynchronous), remote patient monitoring, as well as tele-education (online continuing medical education). Key advantages include convenience, improved care access, shorter waiting times and long-term cost savings, among others. However, potential limitations such as impersonal interaction, technology requirements, data privacy concerns, absent/poorly defined regulations, restricted medical licensure and insurance coverage have been noted.

In sub-Saharan Africa, issues such as suboptimal internet access, poor infrastructure, unstable power supply, absent regulation and competing health needs raise further challenges, especially in rural areas. Notwithstanding, tele-rheumatology can be of practical benefit even in resource-constrained settings as demonstrated in Iran, where roughly 4800 patients were treated remotely by a US-based rheumatologist over 5 years using Skype—a videoconferencing tool. This can be replicated in sub-Saharan Africa, where the relatively few rheumatologists at tertiary academic centres can collaborate with primary care physicians or nurses who will act as remote patient presenters during teleconsultations. The latter will receive in-person or online training in basic rheumatic diseases, patient evaluation, musculoskeletal examination and minor procedures. Apart from providing an opportunity for continuing medical education, it will enhance ‘brain gain’ for the continent.

In Nigeria, over the last 5 years, rheumatology tele-education has enhanced specialist training via the web-based European League Against Rheumatism (EULAR) online rheumatology course which is compulsory for all trainees. As residency training has slowed during the pandemic, the commencement of once-weekly nationwide interactive teleconsulting trainee presentations using Zoom has been quite beneficial. Free applications like WhatsApp are quite popular with African Smartphone and tablet users, permitting patients and providers to communicate via video or chats. With a reduction in hospital visits from COVID-19, patients now send their test results or images directly to their doctors or a hospital platform via a chat application or email. E-consults are also done similarly between rheumatologists and their other colleagues in a bid to protect patients and staff.

Telerheumatology has also been suggested as a triage tool to identify patients requiring in-person visits. For virtual consultations to succeed, proper patient selection is essential with better benefits for those with an established diagnosis, stable disease and the need for screening before an in-person visit. This was demonstrated by Costa et al. with their choice of patients with PsA in Italy. It may be less ideal for those who have a flare, need a procedure or have complex diseases. For our setting, rheumatic conditions such as inflammatory arthritis, degenerative arthritis and musculoskeletal pain can be assessed using telemedicine, whereas complex active systemic diseases like lupus and vasculitis are better evaluated and treated in the hospital first. Stable lupus and vasculitis can subsequently have virtual follow-up appointments between spread-out face-to-face visits.

Multisectoral collaboration is essential between national rheumatology associations, medical regulatory authorities, insurance companies and other relevant stakeholders to develop regulatory guidelines and legislation for telerheumatology practice. In this regard, South Africa is ahead of most African countries regarding telemedicine regulations, although significant hurdles remain. Establishment of regulatory frameworks will address ethical issues such as confidentiality, as well as administrative concerns such as licensure, legal liability, insurance and data security. Liability and jurisdiction should remain with the referring doctors even after specialist consultation especially in cross-border consultations. Regional licensure such as that of the West African College of Physicians will be ideal for cross border practice across member countries. Data encryption and security should be developed with future capabilities for linkage to electronic medical records. Overall, these measures will not only encourage provider participation but boost patient and public confidence in telerheumatology.

To conclude, the benefits of telerheumatology must be balanced by recognising its limits with an adjunctive role to usual care advocated over outright replacement. Its introduction should be gradual, following frequent audits including feedback from patients and providers. Despite the various challenges faced so far, the current pandemic has brought rheumatology practice to the forefront globally. Beyond COVID-19, telerheumatology has the potentials to improve RMD service delivery across Africa if properly harnessed.
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