LETTERS OF BIOMEDICAL AND CLINICAL RESEARCH

Virtual rheumatology appointments during the COVID-19 pandemic: an international survey of perspectives of patients with rheumatic diseases

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Introduction

The transition to virtual health care delivery during the COVID-19 pandemic has been especially important for individuals living with a rheumatic disease given their increased risk for comorbidities and susceptibility to infection [1, 2]. As health care systems and providers rapidly shift to providing virtual care, it is crucial to ensure that efforts to develop and implement virtual care are informed by the patients. We therefore aimed to explore the perspectives of individuals living with rheumatic diseases towards virtual rheumatology appointments during the COVID-19 pandemic.

Methods

We conducted an international online survey (www.unifiedcovid.com). With the support of patient partners and arthritis organizations, we recruited participants

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through social media. Participants were eligible if they were ≥ 18 years of age, diagnosed with a rheumatic disease, and able to complete the survey in English or French. The survey included questions on demographics, type of rheumatic disease(s) and treatments, and experiences with virtual rheumatology appointments. Descriptive statistics were based on non-missing responses. Ethical approval was obtained from the University of British Columbia (H20-01164).

Results

Overall, 429 individuals (median age, 41 years; 90.7% female) completed the survey between April 23, 2020, and June 9, 2020. The majority of participants were from North America and diagnosed with rheumatoid arthritis (57.6%) (Table 1). Ninety-four (26.4%) participants indicated that their rheumatic disease treatment changed and 48 (13.6%) indicated that they discontinued a prescribed medication during the COVID-19 pandemic. Altogether, 58.6% of participants felt supported by their rheumatology care provider(s) during the COVID-19 pandemic.

In total, 154 (44.0%) participants had a virtual rheumatology appointment during the COVID-19 pandemic. The majority ($n = 233$, 68.5%) stated that they did not have a choice between an in-person or virtual appointment for their most *recent* rheumatic disease medical appointment. Most participants (73.8%) were not bothered by a lack of choice regarding appointment format and 71.2% were satisfied with their virtual appointment. Disease severity and satisfaction with virtual appointments were significantly

Table 1 Participant characteristics ($n = 429$)

Characteristic	
Age, median (range)	41.1 (17.6–90.6)
Female, n (%)	330 (90.7)
Country, n (%)	
Canada	164 (38.2)
USA	147 (34.3)
Other	118 (27.5)
Highest level of education, n (%)	
Secondary school	56 (15.5)
Post-secondary (university, college, technical school)	305 (84.5)
Rheumatic disease type[a], n (%)	
Rheumatoid arthritis	247 (57.6)
Osteoarthritis	58 (13.5)
Psoriatic arthritis	45 (10.5)
Systemic lupus erythematosus	43 (10.0)
Sjogren syndrome	32 (7.5)
Ankylosing spondylitis	27 (6.3)
Juvenile idiopathic arthritis	21 (4.9)
Mixed connective tissue disease	19 (4.4)
Gout	9 (2.1)
Systemic sclerosis	4 (0.9)
Systemic vasculitis	4 (0.9)
Myositis	4 (0.9)
Other	33 (7.7)
Disease severity (past week)[b], n (%)	
Under control	54 (14.8)
Mild	113 (31.0)
Moderate	152 (41.6)
Severe	46 (12.6)
Duration of diagnosis, n (%)	
Less than 1 year	58 (13.5)
1 to 5 years	145 (33.8)
6 to 10 years	101 (23.5)
Over 10 years	125 (29.1)
Medications, n (%)[c]	
Prescription medication(s)	339 (79.0)
csDMARD[d]	261 (60.8)
Methotrexate	144 (33.6)
Chloroquine	134 (31.2)
Hydroxychloroquine	129 (30.1)
Biologic or targeted DMARD	170 (39.6)
Corticosteroid	91 (21.2)
Non-prescription medication(s)	137 (31.9)
Tested for COVID-19	
No	310 (91.2)
Yes	30 (8.8)
Positive test	3 (10.0)
Negative test	27 (90.0)

[a] Not discrete as participants can report ≥ 1 type

[b] Disease activity was self-reported

[c] Not discrete as participants can report ≥ 1 medication

[d] Only the most commonly prescribed csDMARDs are listed

Number of missing responses ranged from 0 (0%) to 113 (26.3%)

csDMARD, conventional synthetic disease-modifying anti-rheumatic drug

associated, with higher satisfaction among participants under control (19.3% vs. 4.5%) and with severe disease (11.9% vs. 4.5%) and lower satisfaction among participants with mild (27.5% vs. 43.5%) and moderate disease (41.3% vs. 47.7%) (chi-square p value < 0.05).
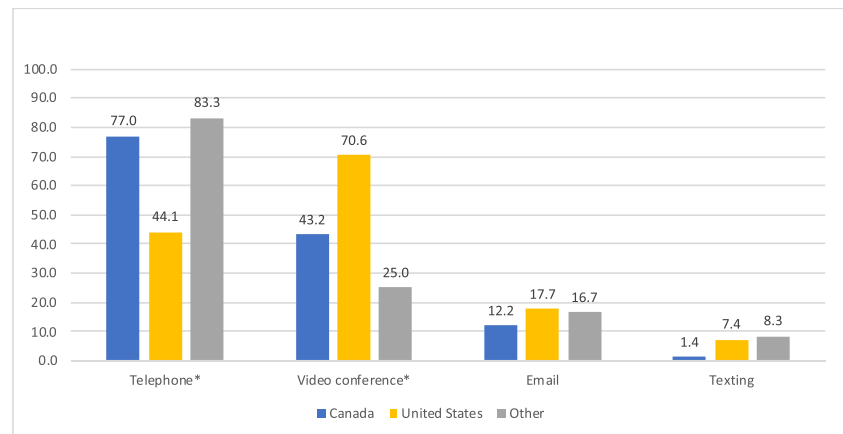
Platforms used for virtual appointments differed by country, with telephone being the predominant modality in Canada (77.0%) and other countries (83.3%) in comparison with the USA (44.1%; chi-square p value < 0.05) (Fig. 1). Patient preference for seeing health providers during videoconference was mixed (no—14.3%; yes—42.9%; no preference—42.9%). The preferred appointment type when receiving difficult news was largely in-person (64.5%), with telephone (19.9%), and video conference (15.7%) being less favored options.

Discussion

The COVID-19 pandemic has generated notable changes to the delivery of rheumatology care, as preliminary results from our international survey show nearly half of participants attended a virtual rheumatology appointment. Recommendations arising from our findings include prioritizing in-person appointments when discussing difficult news, considering a patient's disease severity and providing the option for telephone or video conference, where possible, for virtual follow-up appointments to ensure that patient preferences are considered while supporting practical allocation of resources. Our survey has also demonstrated gaps in care, with only 58.6% of patients feeling supported during the COVID-19 pandemic and 13.6% stopping medications, a particular concern giving recommendations to continue rheumatic disease medications during the pandemic [3]. Quality of virtual care could be improved by adopting an interprofessional collaborative approach and designing electronic health infrastructure that supports information exchange and communication between health professionals [4].

Although ongoing, our survey is limited by its small sample size, low representation of certain rheumatic diseases, and restriction to online survey distribution. Our study sample also consists of a far greater proportion of women than the general rheumatic disease population. Nonetheless, as the delivery of rheumatology care continues to be modified during the COVID-19 pandemic, it is critical to have rapid and responsive patient-centered research to inform decisions that impact care and outcomes of people living with rheumatic diseases.

Fig. 1 Frequency of each platform used for virtual rheumatology appointment(s) during the COVID-19 pandemic according to country. *Chi-square p value < 0.05

Compliance with ethical standards

Disclosures None.

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