



Improving access to care for rheumatology services in Canada

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Received: 2 December 2022 / Revised: 13 January 2023 / Accepted: 30 January 2023 / Published online: 6 February 2023
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Abstract

Rheumatic diseases are becoming increasingly prevalent in Canada, and its associated strain on the healthcare system is expected to increase over the next decades. Furthermore, there is an increasing body of evidence to suggest that access to rheumatology care is currently not meeting established quality of care benchmarks. To frame issues affecting access to care for rheumatology services in Canada, a proposed chronological framework from a rheumatology patient's perspective is proposed. Illustrating principles from a health policy lens including drawing from the stages heuristic framework and multiple streams theory, issues surrounding access to rheumatology assessment, to rheumatological investigations and lastly to appropriate treatment are explored. In particular, the current supply and demand mismatch within the rheumatology workforce presents challenges for patients in accessing rheumatic diseases providers. Potential policy solutions including increasing the pool of rheumatic diseases care providers, enhancing the clinical capacity with extended role providers and increasing uptake of virtual care are discussed. To ameliorate access to rheumatology investigations, the concept of provider education surrounding the appropriateness of investigations and merit-based funding are explored. Lastly, access to rheumatological treatment is framed using biologic therapies as an example, highlighting the policy challenges in biosimilar uptake and associated ethical and political considerations. By using a health policy lens to explore deficiencies within Canada's current system, the overarching goal of this analysis is to set the stage for reasoned and timely solutions in the future.

Keywords Access to care · Health policy · Rheumatology · Rheumatic diseases

Introduction

Rheumatic diseases are common and encompass entities pertaining to degenerative, inflammatory, and autoimmune conditions concerning the musculoskeletal (MSK) system [1]. The World Health Organization (WHO) attributes rheumatic diseases to be the leading cause of worldwide disability [1]. Specifically, the burden of systemic autoimmune rheumatic diseases (SARDs) is large in Canada affecting between 2

and 5 cases per 1000 residents [2]. The burden of rheumatic diseases in Canada is continuing to increase alongside a growing and aging population [3].

Application of health policy principles

Defining access to care

Given the high burden of rheumatic diseases, access to care issues has been a topic of concern both within the physician community and medical societies such as the American College of Rheumatology (ACR) and the Canadian Rheumatology Association (CRA) [4–6]. As defined by the ACR, quality-based care within rheumatology can be defined in part by access, which is the provision of timely and appropriate rheumatology care [7]. There currently exists numerous care gaps in delivering evidence-based care to patients with rheumatic diseases stemming from access issues [8].

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Health policy frameworks and theories

To analyze access to rheumatology care from a health policy lens, defining its constitutive components is foundational. Conceptual frameworks relating to the provision of health services to patients with chronic diseases have been reported, but there is a paucity of application to rheumatology [9, 10]. One such framework was developed in 2013 by Levesque and colleagues, synthesizing five dimensions of accessibility including: (1) approachability, (2) acceptability, (3) availability and accommodation, (4) affordability, and (5) appropriateness. This framework is complemented with five corresponding abilities of populations to interact with the dimensions of accessibility which include (1) ability to perceive, (2) ability to seek, (3) ability to reach, (4) ability to pay, and (5) ability to engage [11]. There are limited studies using health policy principles in addressing issues pertaining to rheumatology, and even more sparse are approaches to evaluate the challenges leading to limited access to rheumatological care within Canada. Hence, this paper will draw upon methodological and conceptual reflections on performing health policy analysis, applied within a rheumatology health services lens [12–14].

A chronological framework from the patient perspective is proposed (Fig. 1). This proposed framework embodies the concept of providing the “right care for the right patient at the right time”, distilling the patient experience of receiving timely assessment, appropriate investigations, and ultimately

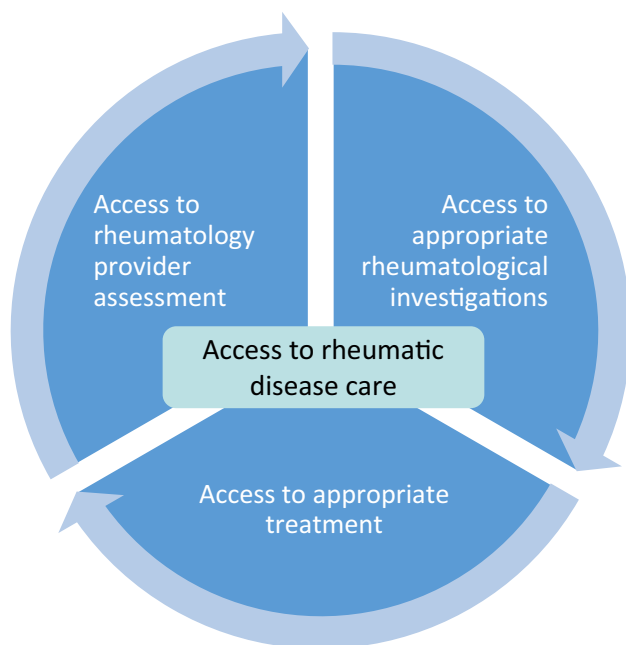


Fig. 1 Proposed access to care framework for patients with rheumatic and musculoskeletal diseases

treatment for their rheumatic diseases. Though this proposed framework does not possess the thorough inputs from an accessibility and ability lens as endorsed by Levesque, it will explore access beyond primary contact with a rheumatologist, as emphasized by the ACR’s white paper on quality measurement [7, 11]. Through this proposed framework, the objective of this paper is to identify the individual health policy challenges and by extension, potential or existing solutions aimed at addressing these access gaps within rheumatology in Canada. In particular, access to (1) rheumatology assessment, (2) appropriate rheumatological investigations, and lastly, (3) treatment will be explored.

Access to rheumatology assessment

The vast majority of MSK disease care is provided in an ambulatory setting by family physicians and subsequently rheumatologists if an inflammatory etiology is attributable [15]. However, the increasing diagnostic complexity of certain SARDs and associated advanced therapeutics at times warrant early expert consultation by a rheumatologist. In Ontario, Canada 2.7% of adults are assessed by a rheumatologist annually [16]. While there exists national benchmarks for recommended maximum wait-times from referral to rheumatologist consultation, prior data has indicated a failure in achieving timely access to care, with the average wait time from referral to rheumatologist consultation being 74 days in Ontario, for suspected inflammatory arthritis, compared to the CRA target of 4 weeks [17]. Therefore, the magnitude of care gap in receiving timely rheumatological assessment is presently large and will be expected to grow, stemming from increased demand in the future.

Supply and demand mismatch

The main principle in providing timely assessment to patients with rheumatic diseases includes linking the correct care providers to the targeted patient population. There is currently a rheumatologist shortage in Canada that is predicted to worsen in the next decade [18]. This problem is further compounded by large geographical variations in the rheumatology workforce, and with many individuals requiring ongoing rheumatology care, fewer new patients are capable of being seen annually, all contributing to deficiencies in access to care [19].

Increasing rheumatologist supply

One solution to address workforce gaps would be to increase the supply of rheumatologists within the Canadian healthcare system [19]. With the global shortage of rheumatologists, there are ethical considerations for recruiting

internationally trained rheumatologists. The training of rheumatologists in Canada is constrained by the minimum 8–9 years of formal medical education required to license as a rheumatologist. Traditionally, there has also been limited coverage of rheumatic diseases in medical education leading to decreased interests amongst trainees to pursue training in this field [20]. Indeed, increased exposure to rheumatology during internal medicine training has been found to be correlated to ultimately pursuing adult rheumatology as a career option [21]. This principle is now extrapolated to undergraduate medical education, with the CRA offering annual studentships to medical students to foster an interest in rheumatology. From a postgraduate medical education perspective, the training path to becoming a rheumatologist involves completing a 3-year residency in internal medicine or pediatrics, prior to rheumatology training. Over time, an increasing number of available training positions have been offered and filled in recent years. As a result of the increase in available training positions, the numbers of trainees in adult rheumatology training programs has significantly increased between 2010 and 2018 by 25%, and as of 2018, there were 82 residents, with 20% of these being visa trainees (who are expected to return to their country of origin after training) [22]. However, there are not enough residency positions to support the training of future rheumatologists to make up the current deficit and meet increasing population demands. Recent estimates suggest a deficit of 200 rheumatologists in Canada, with provinces across Canada failing to meet a ratio of one rheumatologist per 75,000 people as suggested by the CRA [18, 19]. This opens the need for increased involvement from stakeholders, namely the Ministries of Health at various provinces and at the federal level to set up additional positions for physicians interested in pursuing rheumatology.

Expanding the role of physician extenders

Nurse practitioners (NPs), physician assistants (PAs), and advanced practice physiotherapists (APPs) comprise an entity of healthcare professionals entitled extended role practitioners (ERPs) which have the potential of increasing specialist providers for MSK care delivery. Early reports have indicated that patients seen in practices supplemented with NPs or PAs had similar clinical outcomes when compared to rheumatologist-only practices [23]. To enhance uptake of ERPs, health care providers need to advocate for provincial governments to provide funding to interdisciplinary/interprofessional health providers (IHPs) with extra training in arthritis care to assist rheumatologists with outpatient care. Another key pillar is increasing the support and funding to train IHPs. Currently, there are limited formal education opportunities for IHPs across Canada to develop rheumatology skills. The Clinical Practice Skills for Inflammatory Arthritis (CPSIA) program and the Advanced

Clinician Practitioner in Arthritis Care (ACPAC) program are successful training programs that could be expanded to enhance the IHP-arthritis trained workforce across Canada [24]. Lastly, rheumatology training programs need to ensure that there is adequate exposure of trainees to alternate models of rheumatology health care delivery to encourage future implementation of models of care that integrate IHPs into practitioners' future practices.

Telemedicine in mitigating geographic constraints

A large reason for inadequate access to rheumatology care lies in an imbalanced distribution of rheumatology providers, who often congregate practices in urban areas, leaving rural regions underserved [19]. An innovation that has gained traction in the era of the COVID-19 pandemic lies in the use of virtual care to deliver rheumatology assessment. Virtual care encompasses any interaction between patients and healthcare professionals delivered remotely using forms of communication/information technologies for phone or video-based encounters [6]. Although not without limitations, particularly due to rheumatology's emphasis on physical examination in diagnosis which may not be possible at times with a virtual encounter, early evidence suggests no significant difference in quality measures between patients treated with telemedicine versus usual in-person follow-up care [25]. However, a key limitation threatening uptake is the inability to obtain and use the technology requisite for telemedicine (specifically for video-based encounters), which may not be available for all vulnerable populations. This is compounded by jurisdictional hindrances such as current policy restrictions that do not permit rheumatologists to provide this service outside their provincial area of practice, which may include underserved rural areas and in particular the territories in Canada [6].

Health policy challenges and potential solutions

Provincial governments, as the ultimate decision makers surrounding funded rheumatology residency training positions within Canada, must play a role in ensuring workforce supply is appropriate to meet the needs of its citizens. Moreover, the policy environment should support and encourage the use of telemedicine in providing certain components of rheumatology care to those residing in underserved regions.

As described in the health policy literature, the "curse of the temporal challenge" may prove to be a barrier in mobilizing the workforce changes needed [12]. The tension between the long-term nature of policy development contrasted with short-term deliverables often requested by government officials make any meaningful change difficult. This is exemplified by the fact any meaningful health systems effect will unlikely manifest until years after the initial

policy change, as a critical mass of rheumatology providers will take years to ensemble, given the specialized nature of training required. From a health policy theories lens, the multiple-streams theory of agenda setting can be applied as a potential means of explaining the societal impetus for addressing access to care challenges within rheumatology, and on the other hand, innovative actions for potential solutions [12]. Under the multiple-streams theory, there are three types of streams (problem, policy, and political) that can influence public policy agenda setting [13]. One independent problem stream lies in the ageing population leading to a surge in rheumatic diseases prevalence, while a policy stream lies in the COVID-19 pandemic inadvertently playing the role of a catalyst in expanding the use of virtual care for rheumatology patients.

Access to rheumatological investigations

Application of quality-based care

Rheumatological diseases are seldom diagnosed based solely on the results of investigations [26]. In fact, an over-reliance on laboratory and imaging investigations can lead to unanticipated outcomes for the patient, resulting in unnecessary tests and specialist consultations in the form of an investigation or referral cascade. This has the potential to consume limited resources required for patients who may need it on a more urgent basis. Furthermore, as defined by the ACR, a substantial component of access is defined by “appropriate” care [7]. To enhance appropriateness of care, policy interventions from medical societies have spotlighted education to healthcare providers and marketing of the “Choosing Wisely” campaign to enhance value of medical care and appropriate use of investigations to a diverse group including patients and healthcare organizations [27]. In addition, the degree to which quality care is currently provided by physicians needs to be examined, including further exploration into alternate models of payment that reward efficient and high-quality care, which has been defined by the ACR as the “degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” and can be operationalized as the delivery of guideline-concordant care to patients [7]. In fact, there is an increasing interest towards merit-based payment schemes in the USA that may have a role within Canada, exemplified by the Merit-Based Incentive Payment System (MIPS) and anticipated implementation of the MIPS Values Pathways (MVPs) [4]. Specifically, the MIPS and MVPs allow for rheumatology providers to obtain federal reimbursement by attaining pre-specified quality scores that reward quality, cost optimization, promoting interoperability, and improvement activities

in specific domains of patient care [4]. Formal evaluation studies are required in the future to demonstrate its efficacy in improving access to rheumatology consultations, investigations, and care to enhance patient outcomes.

Removing care silos

Scarce medical resources at times can serve as adjuncts for the diagnosis of rheumatic disease and can aid with mitigating diagnostic uncertainty. For example, magnetic resonance imaging (MRI) can be useful in supplementing the history and physical examination in delineating the presence of an inflammatory process, anatomical locations involved, the derivation of a diagnosis and monitoring treatment [28]. Obtaining an MRI scan is a prime example of a care gap in access, given associated long wait-times. Consequently, this has spurred the opening of private MRI centers within Canada, which are paid for outside of provincially administered Medicare, in hopes of shorter wait times [29]. From a policy perspective, the emergence of private MRI centers has been controversial because of concerns with creating a two-tiered system leading to unequal access to health services [30]. Potential solutions that do not invoke upon the integrity of public Medicare include advocacy upon the federal government to uphold the principles of providing reasonable and timely access to healthcare, including the provision of medically necessary investigations for rheumatic diseases. From a punitive perspective, the Federal government should make health transfers conditional on provinces ensuring that maximum wait times for certain investigations (stratified by clinical urgency) are upheld as well as exploring the early success of central triage processes for access to specialty investigations [29]. This will hopefully break down care silos plaguing effective, timely, and appropriate investigations for patients with rheumatic diseases.

Access to treatments

Financial burden of biologic therapies

The epitome of issues affecting access can be attributed to biologics, a class of medications that treat SARDs and have closed a care gap for those who otherwise have recalcitrant disease. The increasing number of biologics over the past two decades has been revolutionary in the treatment paradigm of rheumatic diseases. However, biologics are associated with a significant financial impact on the Canadian healthcare system, accounting for 27.3% of Canada’s total drug sale expenditures in 2018, with this figure expected to increase due to the widened indications for use and the increasing burden of SARDs [31]. This is due to high annual treatment costs, averaging approximately \$27,272 [31]. Akin

to the multiple streams theory detailing why access to rheumatology providers is becoming a prominent issue within society, the rising costs of medical care including inequities regarding access within the current funding system can partially explain why access to treatment is taking center stage in recent years [12].

Policy considerations for funding biologic treatments

Currently, biologics are funded differently across provinces, using a patchwork of mixed private/public funding [32]. No province within Canada has a universal, comprehensive public coverage pharmaceutical plan that provides necessary medications to its citizens free of cost at point-of-access without associated deductibles. Using Ontario as an example, a patient could access biologics through various payment options, with one rarely encountered option being paying out of pocket the list price for treatment. On the other hand, these medications could be accessed through private insurance companies, provided certain pre-specified stipulations are met. An alternative funding platform exists for those from select populations, more specifically individuals with high prescription drug costs relative to household income via the Trillium Drug Program (TDB), or those on social assistance or over the age of 65 with the Ontario Drug Benefit. However, there exists gaps within the mosaic of payment options offered to Ontarians, with program restrictions, deductibles and co-payments presenting as obstacles for drug coverage, and in particular for biologics.

With the gradual elapsing of patent exclusivity periods for biologics over the past several years, biosimilars were touted to represent a potential solution in addressing gaps in treatment access for autoimmune rheumatic diseases, through lower listed costs and by introducing competition within the once monopolized marketplace. Since they are not associated with a patent exclusivity period, their costs are less than originator biologics and early evidence has demonstrated savings in other healthcare systems such as the United Kingdom totaling £166 million for two commonly used drugs studied, infliximab and etanercept for the year 2017–2018 [33]. In Canada, a modeling study has suggested three-year savings totaling upwards of \$645.9 million with mandated biosimilar switches [31].

From a policy perspective, the switch from biologics to biosimilars is a contentious topic and thus far, has not led to the magnitude of predicted savings to the Canadian healthcare system. This is mainly driven by a lack of uptake amongst prescribers and subsequently patients [34]. Despite approval from Health Canada, the evidence surrounding biosimilars' clinical efficacy compared to biologics has been debated amongst certain physician and patients, who have voiced concerns that switching from a biologic

to a biosimilar may lead to worsening disease activity and subsequent worsening of mental health [35, 36]. Another roadblock with the uptake of biosimilars lies in the complex administration process for these medications, which are given through subcutaneous injections or through intravenous infusions. Companies that produce biologics in Canada often have established patient support programs to assist in the administration of these medications, with enrollment through which additionally been shown to enhance disease control in for example, ankylosing spondylitis patients [37]. Though such programs exist with biosimilars, its benefits have not been directly studied and may not be as robust. Hence, increased government resources in providing adequate support for biosimilar administration may indirectly lead to cost savings for the healthcare system through breaking down barriers to biosimilar use [30]. The issues surrounding biologics and biosimilar treatments may also open up the debate surrounding universal pharmacare in Canada. If the state becomes both the provider and purchaser of biologic or biosimilar treatments, cost savings may be directed towards the healthcare system, thereby improving access to those with rheumatic diseases [12].

Conclusions

With the ongoing rising prevalence, rheumatic diseases represent a significant public health issue within Canada and worldwide [1]. In particular, access to care for patients is a large hurdle that warrants pragmatic and timely solutions. We proposed a simplified framework to facilitate health policy discussions surrounding access to rheumatology care, which dissects the concept of access into chronological components encompassing access to rheumatic disease care providers, to appropriate rheumatological investigations and lastly, to treatment (Fig. 1).

Under the multiple streams theory, access to rheumatology services is being placed into the context of contemporary health policy, with the recent COVID-19 pandemic demonstrating vulnerabilities in accessing care along with the growing ageing population anticipated to worsen these trends. Moreover, the rising societal costs of healthcare services and costs to individual Canadians are also serving as an imperative to address challenges in treatment access. From a policy lens under the stages heuristic framework, Canada is unfortunately at the agenda setting stage where these issues are only beginning to surface for decision makers. To transition to the formulation stage of designing and enacting potential policies, concerted efforts to increase the rheumatology supply and distribution of the workforce are discussed as potential solutions through ramping up training of care providers, exploring various models of care and capitalizing on virtual care to breakdown geographical limitations.

Furthermore, to address issues with access to rheumatology investigations, medical practitioners must first question and provide education on what is appropriate which will require a diverse set of actors including medical societies, faculties of medicine and lastly governments to remunerate physicians based on quality, rather than quantity of care provided. Moreover, the principle of “Accessibility” within the Canada Health Act needs to be upheld by the federal government by ensuring that provincial health care systems ensure patients with rheumatic diseases receive timely investigations, either through withholding or increasing transfer payments with a “carrot and stick” method. Exciting new models involve a sectoral integrated approach by removing the siloed patchwork of institutions, either public or private, that administer tests such as MRIs using innovative central triaging. Lastly, although the introduction of biosimilars was once seen as the magic bullet to curtailing the rising costs associated with treating severe SARDs, its uptake compared to the pricier biologics has been lukewarm to date, further potentiating difficulties in accessing treatment in rheumatology. This may be potentially mitigated by the creation of a universal pharmacare system to translate savings to the Canadian healthcare system for drug expenses and facilitate access to rheumatological medications. Although potential solutions proposed within this analysis are not without its shortcomings, framing the issues plaguing access to rheumatology care within a health policy lens will hopefully generate discussions regarding further solutions. With swift and reasoned actions, hopefully change is on the horizon for improving access to care for the millions of Canadians suffering from rheumatic diseases.

Author contribution TK and JW was involved in the drafting of this manuscript, revisions for important intellectual content and approved of the final version to be published. All authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Data availability All data from this study can be provided to readers upon reasonable request through contacting the corresponding author.

Declarations

Ethics approval and consent to participate The research ethics board at the University Health Network determined that this study does not meet the definition of research and approval is not required.

Disclosures None.

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