A sustainable rheumatology workforce is essential to achieve the mission of the Canadian Rheumatology Association (CRA). Most importantly, a sustainable rheumatology workforce is necessary to meet Canada’s population health needs, and to address the priorities of better access, better health, better care experience, and reduced costs.

Rheumatic and musculoskeletal diseases (RMDs) are a leading cause of disability worldwide and cause significant economic and societal burdens internationally and in Canada. There is significant evidence to demonstrate that early diagnosis and targeted treatment guided by a rheumatologist improves long-term patient outcomes and reduces costs to the health care system when compared to outcomes for patients who do not have access to specialist rheumatology care (5, 6). Therefore, careful planning for the future is important to ensure there are adequate resources to provide the necessary specialty care to Canadians living with RMDs.

An essential component in ensuring sustainability of the rheumatology workforce is to establish and maintain sufficient capacity at the postgraduate training level. Choice of practice discipline as a lifelong career can be one of the most difficult aspects of physician training. Exacerbating this challenge are the vast array of available specialties, timing of choices, as well as practice considerations in terms of lifestyle and physician resource needs.

Given the aging Canadian population and the high prevalence of RMDs and RMD related disability in the country, there is significant interest to better understand rheumatology workforce requirements and projections in order to inform policies at the national and regional levels.

To speak with a unified and cohesive voice, the CRA has developed and endorsed 6 position statements to help prioritize and inform strategies, policies, programs, and funding to help protect the sustainability of Canada’s rheumatology workforce. This was done by reviewing, synthesizing and analyzing current data and literature on Canada’s rheumatology workforce. The position statements and accompanying strategies are not intended to be exhaustive, prescriptive, or authoritative. The intention of this report is to illuminate, educate, stimulate, and encourage meaningful discussion to further efforts to strengthen Canada’s rheumatology workforce.
Recommendations

Recommendation # 1: Increase recruitment/training of clinical FTE (Full-Time Equivalent) rheumatologists.

Although the rheumatology workforce has been growing over time, the growth is insufficient due to population growth, increasing patient demands for services among an aging patient demographic, and demographic changes to the workforce, the latter of which is changing the workforce capacity. Increasing feminization, generational effects, a large volume of impending retirements, and other factors are contributing to lower service capacity amongst rheumatologists than previous years. There are deficits in the total number of rheumatologists in Canada without taking into account that there are fewer clinical FTEs than the absolute number of practicing rheumatologists. While the true deficit has not fully been quantified, immediate efforts to expand recruitment/training of clinical FTEs are needed considering the lag time required to train new rheumatologists. Recommended strategies include the following:

1. Recruitment of new rheumatologists by improving rheumatology exposure in medical school.
2. Recruitment of new rheumatologists by increasing rheumatology residency spots and reducing residency vacancies.
3. Recruitment of new rheumatologists by making rheumatology more attractive.
4. Enhance recruitment of international medical graduates (IMGs).

Recommendation # 2: Improve the Regional Distribution Of Rheumatologists Across Canada

The geography in Canada creates challenges for the delivery of rheumatology care services to Canadians living in rural and remote communities. Canadians living in rural areas comprise 18% of the population (12) yet the majority of rheumatology practices congregate in urban centres and a minority participate in travelling clinics to remote areas. Consequently, rural, and remote communities lack access to rheumatologists and face long travel distances to rheumatology care. Considering that RMDs often impair mobility which hampers their ability to participate in society and in seeking medical care, barriers to rheumatology care need to be understood using an ethical paradigm by bringing care to these regions (versus patients travelling long distances to seek care). Targeted efforts with committed government policy and funding are necessary to address these unique needs of these communities. Recommended strategies include the following:

1. Medical schools/training programs should screen for interest in rural medicine, rural origins, family currently living in rural community.
2. There is a need to monitor practice locations and practice scope of graduates of rheumatology residency programs.
3. Return-of-service agreements, bursaries, scholarships and other financial incentives should be available to rheumatologists to provide service to underserved areas.
4. Ensure fair incentives are provided to locum rheumatologists to travel to provide services to underserviced areas.
5. Funding to support telehealth in rural or underserviced areas to deliver and assist with the delivery of rheumatology services.
6. Medical schools with undergraduate and graduate rheumatology specialty programs should promote and require training rotations in communities outside of urban academic centres.
7. Rheumatology specialty programs should provide formal training in alternative models of care to underserviced, rural and remote areas.
8. Recruit IMGs for underserviced communities.
9. Identify and advertise priority areas in Canada that lack rheumatologists.
10. Increase the number of rheumatologists participating in telemedicine/virtual care to underserviced areas.
11. Provincial governments should not impose barriers for rheumatologists providing telehealth services to out-of-province Canadian residents.
Recommendation # 3: Enhance Retention Of Rheumatologists Within The Workforce

Rheumatology supply is the product of a dynamic interplay between the production of new rheumatologists, and attrition of existing rheumatologists – either temporarily or permanently – from the workforce. Rheumatologists may temporarily leave practice because of parental leave, illness, sabbaticals, and/or disability. They also leave the workforce entirely due to retirement or career changes. Strategies to retain rheumatologists within the workforce are therefore important to prevent further deficits in supply. A sustainable rheumatology workforce requires support for providing coverage for temporary departures, and support for established rheumatologists to avert leaving clinical practice prematurely. Canada’s rheumatology workforce faces a large number of impending retirements, and there are benefits of retaining older rheumatologists by adjusting workloads over an abrupt termination of services. Recommended strategies include the following:

1. Provide better parental leave programs.
2. Provide support to late-stage career rheumatologists to enable a gradual transition out of the clinical workforce.
4. Monitor workforce wellness and provide comprehensive wellness and mental health resources and supports.
5. Develop strategies and provide supports to IMG rheumatologists.
6. Develop strategies and provide supports to rheumatologists practicing in remote areas.

Recommendation # 4: Promote and Enhance Workforce Capacity with Interdisciplinary Health Providers

To deliver optimal care and treatment to patients, and make maximum use of rheumatologists’ time, rheumatologists benefit from the support of rheumatology-trained nurses, occupational therapists, social workers, physiotherapists and other interdisciplinary health providers (IHPs). With rare exceptions, there is no specific funding allocated for physiotherapists, occupational therapists, nurse practitioners (NPs), and physician assistants (PAs), administrative overhead, and nursing, essential to supporting rheumatologists in the care of people with RMDs. In order to support a sustainable rheumatology workforce, a competent health workforce requires support in implementing effective models of care (13). Clinical service capacity is most likely to be increased by models of care that integrate the work of multidisciplinary teams thereby shifting workflow, responsibilities and access to programs. In such service delivery models, the skillsets of advanced practice or extended role practitioners (ERPs) may be leveraged with medical directives or authorized activities in place. Therefore, the CRA supports the need to expand rheumatology workforce capacity by incorporating well-trained IHPs. Recommended strategies include the following:
1. Advocate for provincial governments to provide funding for interdisciplinary health providers with extra training in arthritis care to assist rheumatologists in the delivery of outpatient care.  
2. Support and fund training of interdisciplinary health providers.  
3. Rheumatology training programs need to ensure that there is adequate exposure to alternate models of rheumatology health care delivery to encourage future implementation of models of care that integrate IHPs.

**Recommendation # 5: Promote and Support Research To Provide Data About The Rheumatology Workforce To Plan For The Future Health Care Needs Of Canada’s Population.**

Major gaps exist in currently available data on the current and future rheumatology workforce in Canada. The question of how many rheumatologists should be trained in order to meet future population needs must be addressed by studies modeling the need and demand for, and supply of rheumatologists to provide health planners, rheumatology societies, universities, health care funders, and policy makers with workforce targets. Recommended strategies include the following:

1. Advocacy directed towards governments and research funding agencies to appreciate the research gaps surrounding workforce planning and the need to adjust their funding opportunities and activities accordingly.
2. Develop realistic, scientifically sound workforce models for pediatric and adult rheumatology care.
3. Enhance dissemination of rheumatology workforce research to inform policy decision-making.
4. Support research on the apparent disparities impacting rheumatologists (e.g. by gender).
5. Support research on models of care that enhance rheumatology clinical workforce capacity.
6. Support research on defining clinical Full-Time Equivalent (FTE) measure(s) for rheumatology.
7. Develop/adapt a rheumatology conceptual and analytical framework to build capacity for research, research use, strategic planning, evaluation and knowledge translation for the development of improvement of human resources for health.

**Recommendation # 6: Support Equity, Diversity, & Inclusion In Rheumatology**

It is well recognized that bias and discrimination exist within all areas of society, including medical professions and healthcare. A more equitable and diverse medical profession reduces the bias and discrimination experienced by those practising within it and improves their health and wellness. Evidence shows that physicians experience greater career satisfaction and a greater sense of solidarity with their profession while patients experience improved care and a
more responsive and adaptable health care system. Concrete steps must be taken to eliminate bias and discrimination and create opportunities for all. Recommended strategies include the following:

1. Take actions for closing the gap (24) including anti-oppression training; challenging the hidden curriculum in medical education; fair and transparent hiring and referral processes; changing the relative value of fee codes and transparent reporting of physician payments stratified by gender; promoting women for leadership positions; and ensuring balanced representation on journal editorial boards, journal authorship positions, speaker invitations at medical conferences, and grant and personnel award success rates.

2. Support efforts to further study and identify all inequities (and developing strategies for overcoming these), including the intersectionality between gender and ethnicity within the principles of equity, diversity and inclusion.

3. Support efforts to recruit and train fellows from underrepresented communities and equity-deserving groups.

In summary:

Lack of access to early diagnosis and treatment is perhaps one of the main access barriers faced by people with RMDs in achieving high-quality care. Therefore, the endorsed recommendations in this position paper are directed at supporting the overarching principle that all patients with suspected systemic RMDs should be referred to rheumatology care as soon as possible to confirm the diagnosis and determine the optimal course of follow-up care. Ensuring a sustainable rheumatology workforce is the foundation to ensuring the population’s health needs are being met.

Taking action on 'upstream' investments in health systems that focus on health promotion and health protection have been shown to result in decreased demand for and the utilization of ‘downstream' acute care health facility-based services and reduces health care expenditures over the long term (53). Historically, Canada has been slow to invest in health human resource planning (54). However concrete steps are urgently needed to strengthen Canada’s rheumatology workforce. The CRA’s recommendations on enhancing the sustainability of Canada’s rheumatology workforce were developed to help accelerate health human resource planning activities. The recommendations target ways to improve the number and distribution of rheumatologists and overall rheumatology workforce capacity. The strategies identified provide important considerations where further efforts should be directed for developing, testing, and implementing sound policies and programs. Implementation of these recommendations and strategies will help to achieve the crucial aim of improving access to rheumatology care and early diagnosis and treatment of RMDs, as well as strengthening the workforce at large.
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