

Artificial intelligence for family medicine research in Canada: current state and future directions

Report of the CFPC AI Working Group

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Abstract

Objective To understand the current landscape of artificial intelligence (AI) for family medicine (FM) research in Canada, identify how the College of Family Physicians of Canada (CFPC) could support near-term positive progress in this field, and strengthen the community working in this field.

Composition of the committee Members of a scientific planning committee provided guidance alongside members of a CFPC staff advisory committee, led by the CFPC-AMS TechForward Fellow and including CFPC, FM, and AI leaders.

Methods This initiative included 2 projects. First, an environmental scan of published and gray literature on AI for FM produced between 2018 and 2022 was completed. Second, an invitational round table held in April 2022 brought together AI and FM experts and leaders to discuss priorities and to create a strategy for the future.

Report The environmental scan identified research related to 5 major domains of application in FM (preventive care and risk profiling, physician decision support, operational efficiencies, patient self-management, and population health). Although there had been little testing or evaluation of AI-based tools in practice settings, progress since previous reviews has been made in engaging stakeholders to identify key considerations about AI for FM and opportunities in the field. The round-table discussions further emphasized barriers to and facilitators of high-quality research; they also indicated that while there is immense potential for AI to benefit FM practice, the current research trajectory needs to change, and greater support is needed to achieve these expected benefits and to avoid harm.

Conclusion Ten candidate action items that the CFPC could adopt to support near-term positive progress in the field were identified, some of which an AI working group has begun pursuing. Candidate action items are roughly divided into avenues where the CFPC is well-suited to take a leadership role in tackling priority issues in AI for FM research and specific activities or initiatives the CFPC could complete. Strong FM leadership is needed to advance AI research that will contribute to positive transformation in FM.

Editor's key points

- ▶ Artificial intelligence (AI) is transforming many sectors, including health care; however, there are few examples of AI successfully having been implemented in family medicine (FM) and primary care settings in Canada.
- ▶ The College of Family Physicians of Canada AI Working Group conducted an environmental scan of literature and held an invitational round-table discussion to better understand the current state of AI for FM research in Canada and its future potential.
- ▶ While round-table participants expressed concerns about how AI for FM research could become fragmented and commercially driven, they also believed it could enhance FM practice and care delivery with appropriate funding and a focus on FM values and teamwork. The round-table discussions identified 10 candidate action items for the College of Family Physicians of Canada to consider to drive progress in this field.

L'intelligence artificielle pour la recherche en médecine familiale au Canada : état de la situation et orientations futures

Rapport du Groupe de travail du CMFC sur l'IA

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Résumé

Objectif Comprendre l'état de la situation de l'intelligence artificielle (IA) pour la recherche en médecine familiale (MF) au Canada, déterminer comment le Collège des médecins de famille du Canada (CMFC) pourrait soutenir des progrès positifs à court terme dans ce domaine et renforcer la communauté qui œuvre dans ce domaine.

Composition du comité Les membres d'un comité de planification scientifique ont servi de conseillers, de concert avec des membres d'un comité consultatif du personnel du CMFC, dirigé par la fellow TechForward du CMFC et d'AMS et formé de leaders du CMFC, de la MF et de l'IA.

Méthodes Cette initiative comportait 2 projets. En premier lieu, une analyse environnementale a été effectuée dans les ouvrages publiés et la littérature grise sur l'IA pour la MF, rédigés entre 2018 et 2022. Le deuxième projet, soit une table ronde sur invitation tenue en avril 2022, a réuni des experts et des leaders en IA et en MF dans le but de discuter des priorités et de produire une stratégie pour l'avenir.

Rapport L'analyse environnementale a permis de cerner des recherches dans 5 principaux domaines d'application en MF (soins préventifs et profilage des risques, soutien à la décision des médecins, efficacies opérationnelles, autogestion par les patients et santé populationnelle). Même si les essais ou les évaluations des outils fondés sur l'IA ont été peu nombreux dans les milieux de la pratique, des progrès ont été réalisés, depuis les revues antérieures, dans la mobilisation des intervenants pour déterminer les principaux éléments à considérer au sujet de l'IA pour la MF et les possibilités dans ce domaine. Les discussions en table ronde ont mis en évidence les facteurs qui entravent ou qui facilitent une recherche de grande qualité; elles ont aussi fait valoir que, malgré l'immense probabilité que l'IA engendre des bienfaits dans la pratique de la MF, la trajectoire actuelle de la recherche doit changer, et un plus grand soutien doit être apporté pour obtenir les avantages souhaités et éviter les préjudices.

Conclusion Dix mesures prioritaires que pourrait prendre le CMFC pour appuyer des progrès positifs à court terme dans ce domaine ont été identifiées, dont certaines ont été amorcées par un groupe de travail sur l'IA. Les mesures prioritaires se divisent grosso modo en avenues où le CMFC est bien placé pour exercer un rôle de leadership en s'attaquant aux questions prioritaires de l'IA pour la recherche en MF, ainsi qu'aux activités ou aux initiatives précises que pourrait réaliser le CMFC. Un fort leadership en MF est nécessaire pour faire progresser une recherche en IA qui puisse contribuer à une transformation positive au sein de la MF.

Points de repère du rédacteur

- ▶ L'intelligence artificielle (IA) transforme de nombreux secteurs, dont les soins de santé; par ailleurs, il existe peu d'exemples de l'implantation réussie de l'IA en médecine familiale (MF) et dans les milieux de soins primaires au Canada.
- ▶ Le Groupe de travail du Collège des médecins de famille du Canada sur l'IA a effectué une analyse environnementale de la littérature scientifique et a organisé une table ronde de discussions sur invitation afin de mieux comprendre la situation actuelle de l'IA pour la recherche en MF au Canada et son potentiel futur.
- ▶ Bien que les participants à la table ronde aient exprimé des préoccupations entourant la façon dont l'IA pour la recherche en MF pourrait devenir fragmentée et axée sur des intérêts commerciaux, ils croyaient aussi qu'elle pourrait améliorer la pratique de la MF et la prestation des soins, sous réserve d'un financement approprié et d'un accent mis sur les valeurs de la MF et le travail en équipe. Les discussions en table ronde ont permis de cerner 10 mesures prioritaires que le Collège des médecins de famille du Canada pourrait envisager afin d'orienter les progrès dans ce domaine.

Family medicine (FM) is a core component of primary care and the foundation of the Canadian health care system, providing front-line preventive, diagnostic, curative, and palliative care across the lifespan of patients.¹ Artificial intelligence (AI) is a broad interdisciplinary field centred on computers performing intelligence tasks^{2,3} with the potential to transform FM; however, there are few examples to date of AI successfully having been implemented in these settings and there are concerning gaps in research.⁴⁻⁸ In April 2021 the College of Family Physicians of Canada (CFPC) partnered with Associated Medical Services (AMS) Healthcare to engage a CFPC-AMS TechForward Fellow (J.K.K.) to lead initiatives related to AI, FM, and compassionate care.⁹ This report describes 2 projects conducted to better understand the current state and future directions of AI for FM research in Canada: an environmental scan and an expert round table. **Box 1** summarizes the findings.¹⁰ A scientific planning committee (L.M.B., M.G., and S.H.T.) provided guidance alongside the CFPC staff advisory committee (J.S., M.B., N.P., and S.S.) that oversaw all TechForward activities. These committees (and new members) remain active as the CFPC AI Working Group.

The work described in this report was completed before the launch of ChatGPT and other large language model and generative AI technologies.¹¹ While many of the recommendations and insights still hold, substantial advancements in the field (including those that address aspects of our future directions section) are not represented as they occurred between the time of the round table and report publication.

Methods

First, we conducted an environmental scan to understand the current landscape of AI for FM research in Canada. Second, we led an expert round-table discussion focused on future expectations and needs.

Environmental scan: current AI for FM research landscape in Canada. Our scan built on 2 previous scoping reviews. The first identified 405 studies involving AI and primary care published up to 2018; it concluded that the field was nascent and needed more primary care stakeholder engagement.⁴ A second captured 90 studies published up to February 2020 that applied AI in community-based primary care settings, further emphasizing gaps in tool availability and in appropriate evaluation.⁵

To identify more recent relevant literature, the CFPC librarian searched 3 databases (Scopus, MEDLINE, and Global Health) for studies published in English between 2018 and 2022 that had affiliation with or data from Canada using key words related to AI and FM. One author (M.E.) conducted title, abstract, and full-text screening with uncertainties resolved by J.K.K. and S.C. Studies were excluded if they were not relevant to FM in Canada. Further, M.E. identified published and gray literature through Web searching

Box 1. Executive summary

We conducted an environmental scan followed by an expert round table discussion to better understand the current state and future directions of AI for FM research in Canada.

Environmental scan findings (literature published between 2018 and 2022 and gray literature search)

- Major domains of AI applications in FM: preventive care and risk profiling, physician decision support, operational efficiencies, patient self-management, and population health
- AI for assisting with diagnosis was the most extensively researched category
- AI for improving operational efficiencies and reducing provider burnout, including through administrative task assistance, is expected to be highly beneficial and associated with lower risk than clinical applications of AI; however, little research in this domain was found
- Main data set used: CPCSSN
- Main AI subfield used: supervised machine learning
- A few studies engaged stakeholders to gather their perspectives on key considerations and promising applications of AI for FM and primary care
- Despite many promising applications, few studies have tested AI-based tools in real-world FM clinical settings

Round-table discussion conclusions

- The current research trajectory threatens to fragment future AI for FM initiatives across teams and sectors and to result in little positive impact on clinical processes and patient outcomes, potentially exacerbating inequities; however, such problems can be mitigated with improved funding and the establishment of close partnerships and collaborations between AI experts, FM experts, and other stakeholders
- Progress in the field will require improved data access, quality, and governance; interdisciplinary research teams with diverse stakeholder engagement; and training for physicians and other AI end users
- Successful AI for FM applications will support FM values and functions as well as the Quintuple Aim¹⁰
- Ten candidate action items that the College of Family Physicians of Canada could adopt to support progress were identified

Overall, AI may increase the capacity and scope of FM practice with expected benefits at the patient, provider, and system levels including better accessibility, efficiency, quality, health status, and public satisfaction.

AI—artificial intelligence, CPCSSN—Canadian Primary Care Sentinel Surveillance Network, FM—family medicine.

and planning committee knowledge. Appendix A (available from **CFPlus***) includes detailed methodology. We also searched for related organizational reports, guidelines, and commentaries; findings are summarized in Appendix B.*

***Appendices A, B, C, and D** and the **list of committee participants** are available from <https://www.cfp.ca>. Go to the full text of the article online and click on the **CFPlus** tab.

Expert round-table discussion: advancing AI for FM research in Canada. To build on the environmental scan and strategize about practical next steps, we convened a virtual round-table discussion with 30 FM and AI experts and leaders from across Canada and the United States with involvement or interest in AI for FM research in Canada. The round-table discussion, held on April 11, 2022, had 4 objectives for the Canadian context:

- to understand the current landscape of AI for FM research;
- to envision future research directions of AI for FM;
- to identify how the CFPC could support near-term progress (over 3 to 5 years) in this field; and
- to strengthen the research community in this field.

Our format consisted of presentations, large group discussions, and breakout groups. The agenda (Appendix C*) was informed by the environmental scan, a pre-meeting survey of participants that served to provide a breakdown of FM and AI expertise and perspectives (Appendix D*), and planning committee expertise. Virtual breakout groups each had 2 facilitators (a CFPC staff member and a scientific planning committee member) and participants were assigned to groups to ensure each group had FM, AI, and CFPC representation. Participants were encouraged to ground their clinical considerations in the purposes of preventive care and risk profiling, physician decision support, and operational efficiencies. Prior to the event participants were provided with an extended version of the environmental scan and links to relevant resources on AI and FM.

Report

Current state. Our environmental scan identified 52 eligible studies that fell into 2 categories: research that had developed or applied a specific AI model or tool in FM and studies that had engaged stakeholders to address general questions on AI for FM (eg, to explore development and social considerations).

Development of AI technology in FM research. Research on AI development or application included 5 domains, described below: preventive care and risk profiling, physician decision support, operational efficiencies, patient self-management, and population health. Appendix B* provides details on identified studies from each domain.

Preventive care and risk profiling: Artificial intelligence-based personalized predictions may help physicians identify and triage high-risk patients. Such tools can continuously run in the background of a computer using data sets stored in an electronic medical record (EMR) system, notifying physicians when a patient is at high risk of an adverse health outcome or condition, or they can be integrated into a tool for active use during clinical encounters (eg, to support shared decision making around modifiable risk factors).

Physician decision support: Artificial intelligence may support earlier and more accurate diagnosis and support personalized treatment plans. Artificial intelligence can generate recommendations for a single point in time or continuous support for ongoing sequences of decisions over time.

Operational efficiencies: Artificial intelligence may decrease the administrative load of health care staff and organizations by, for example, helping with documentation, scheduling, and referrals, and managing and synthesizing information across patient records, literature, and guidelines.

Patient self-management: Patient-facing AI tools include those acquired by patients themselves as well as tools that physicians recommend for use between appointments. Such tools may operate synchronously or asynchronously (eg, to track symptoms, coach patients, and support self-triaging).

Population health: Artificial intelligence may help users identify high-risk subgroups of patients, learn about or make recommendations for a given set of patients, and summarize expected needs.

Field-level stakeholder engagement research. Five studies or consultations conducted between 2018 and 2022 engaged stakeholders to hear their perspectives on meaningful uses of AI for FM and primary care as well as key considerations, ranging from province-specific to international qualitative and group consultation-based methods (Appendix B*).¹²⁻¹⁶ **Box 2** summarizes key take-away messages.¹²⁻¹⁶

Despite the ability of stakeholders to envision opportunities that could arise from AI use, there was little knowledge of AI use in real-world settings and there were concerns about whether tools would be developed to align with core values and functions of FM and primary care. In terms of priorities, applications designed to address contributors to provider burnout, such as chart documentation, were seen as having high potential impact with less risk than applications designed for clinical decision support. Clinical decision support for preventive care, treatment, and follow-up was deemed desirable but had higher potential risks in areas such as medical error and loss of skills as well as greater ethical, legal, and regulatory considerations. While AI may facilitate earlier diagnosis of treatable conditions and reduce unnecessary testing and overdiagnosis, poorly developed tools risk having the opposite effect. Complex and incompletely understood situations, such as multimorbidity or rare diseases, were seen as useful clinical application targets but again with the caution that low-quality tools may miss diagnoses or contribute to overtreatment and overdiagnosis. In addition to considering what a good AI-driven tool would look like in practice, concerns about data were prominent. While health data are essential to most AI applications in FM and primary care,

Box 2. Key take-away findings from previous research on AI for FM and primary care

Core values or functions for AI to support

- Health equity
- Patient-centredness and safety
- Provider well-being
- System improvement, cost-effectiveness, and efficiency

Potential risks

- AI tool development
 - Biased data, tools, or outputs
 - Inequity due to method of tool development or distribution and access
 - Exclusion of vulnerable populations
 - Insufficient stakeholder collaboration
- AI tool use
 - Misuse or misinterpretation of AI outputs
 - Secondary effects (eg, use by insurance providers to discriminate)
 - Reduction in humanistic aspects of care and decision making
 - Reduction in clinical skills and capacity; overreliance on AI-based tools
 - Workflow disruptions, including alert fatigue
 - Changes in performance or data with tool use over time
- Legal, regulatory, ethical, and social considerations
 - For providers and patients (eg, when AI recommendations are incorrect or inconsistent with human judgment)
 - Data security and privacy

Key considerations

- Data considerations
 - Availability and quality
 - Sharing, interoperability, and governance
- AI tool development
 - Computing power and infrastructure
 - Informed patient consent for data use
 - Interdisciplinary teams with stakeholder engagement and co-design of tools
 - Education and training for interdisciplinary team members (AI tool developers and primary care stakeholders)
 - Open science (eg, open-access publications, code sharing)
 - Explainable and interpretable AI framework appropriateness and suitability
 - Trust in technology
 - Evaluation and evidence base for tools before deployment
 - Cultural sensitivity and appropriateness
- Health care organization and workforce considerations
 - System capacity and culture
 - Informed patient consent regarding data and tool use
 - Regulatory oversight and safety monitoring
 - Education and training for end users

AI—artificial intelligence, FM—family medicine.

Data from Liyanage et al,¹² Rahimi and Légaré,¹³ Upshaw,¹⁴

Kueper et al,¹⁵ and Terry et al.¹⁶

health data-related initiatives were already under way at the time of our project¹⁷⁻¹⁹ so we decided to focus on AI throughout the round table. Our findings complement and support concurrent data initiatives. Appendix B* discusses challenges affecting AI for FM research identified across all eligible studies.

Round-table discussion. The first topic addressed in the round-table discussion was the current state of AI for FM research in Canada. This was followed by a brainstorming session on the potential intersection between what “could” happen given the near-term capabilities of AI and what “should” happen given FM values and functions. Participants agreed that the environmental scan accurately reflected the state of AI for FM research in Canada at the time of the event. Two additional ideas were raised to add to the field-level stakeholder engagement research findings: the need to incorporate patient and public voices (eg, research indicated patients and providers have different concerns about data sharing)^{20,21} and the need to position AI as part of larger digital transformation.²²

Future directions: Round-table participants expressed that research continuing along the current trajectory is expected to generate a fragmented, commercially driven approach to AI for FM with questionable benefit and exacerbated inequities. Participants were, however, optimistic that with improved funding, a focus on FM values and functions, teamwork, and data, AI will improve FM practice and care delivery. Areas of improvement may include better efficiency, workflow, patient care, diagnostic accuracy, therapeutic decision making, and work-life balance for physicians. Strategic considerations and tangible steps are synthesized below.

Family medicine-focused work: Artificial intelligence for FM research needs to be centred on FM values and tightly coupled with clinical needs and functions. The identified principles generally reflect those outlined in the CFPC’s principles²³ and in the Quintuple Aim.^{10,24,25} They include continuity; comprehensiveness; patient-centredness; compassion and high-quality relationships; equity, diversity, and inclusion; information governance; and positive physician work life. Participants expressed worry that because development and early adoption opportunities often require substantial funding there may be a lack of diversity in development teams and the resulting products may preferentially focus on more lucrative opportunities that may exclude marginalized or underrepresented populations. Capacity and resources for ongoing monitoring and maintenance over time also need to be considered. Since private corporations will likely have a major role in tool development and marketing, it will be crucial for physicians and patients to influence the direction of AI for FM development via collaboration or other advocacy channels.

Interdisciplinary research and development collaborations: Research needs to be interdisciplinary and to include diverse stakeholders (eg, physicians, nurses, social workers, epidemiologists, AI experts, data engineers, software developers, patients). Intersectoral partnerships can be beneficial, although caution is needed as commercial companies exhibit a range of motives, values, and product quality. Successful teams will require funding and advocacy to start and research ethics boards need to be set up to assess AI for FM research properly and efficiently.

Training of end users is needed to increase FM stakeholder involvement in research and to support scaling up beneficial innovations. Sustained success will require general AI education along with training on how to integrate AI technologies with clinical decision making, training in related areas (eg, law, cyber security), and motivating considerations around AI and digital transformation among trainees.

Data: Advancements in AI research and applications will require improved data quality, access, and governance. This includes both curated data for research and the ability to test certain AI-driven tools with unprocessed real-time data created during care encounters. Data challenges include the existence of multiple EMR vendors across Canada (and associated technologic and financial barriers to access and interoperability) with governance and public policy as additional obstacles to a world-class health data strategy.²⁶⁻²⁹ Additional concerns were raised about data privacy, responsible stewardship, and storage capacity. Furthermore, participants noted incentives or demonstrated value may be needed to motivate higher-quality data entry given that while improved data quality is expected to enhance AI performance it may also

have workflow implications. The CFPC published a position statement on EMR data access in 2017 with relevant points to consider.³⁰

Where to start: In the near term, participants encouraged targeting AI to clinical operations. For example, administrative help can simultaneously improve operational efficiency and mitigate provider burnout while building trust around AI applications. A second expected high-impact area is to use AI to improve access to care and to support unattached patients, such as through digital triage and communication tools, which may further support care continuity. Clinical intervention tools for diagnostic or therapeutic purposes can also directly improve care, although there was concern that many existing initiatives use a specialty approach whereby data sets or tools specific to single conditions are used and created. Using nongeneralizable tools in FM can fragment care and reduce patient-centredness and comprehensiveness. Instead, tools should consider multimorbidity and whole-person care.

How can the CFPC support progress toward a positive future for AI in FM? This part of the round-table discussion began with presentations to familiarize participants with the roles and capacities of the CFPC. Breakout groups then brainstormed 2 to 3 potential action steps that the CFPC could take within 3 years to support positive progress in the field, followed by a group session to further propose and discuss candidate action items. The CFPC staff then circled back to participants for comment and to produce a refined list of candidate action items (**Box 3**).³¹⁻³⁴

Box 3. Refined list of candidate action items for the CFPC to engage in to support positive progress in AI for FM research: Order of items listed does not indicate priority or importance.

The first 3 items relate to the CFPC taking on a leadership role to tackle priority issues in AI for FM research. This may include convening a working group; hosting round table discussions to generate a manifesto, to strategize, or to guide advocacy; and writing position papers on key areas. Different partnership opportunities with other organizations exist to explore for each.

1. Establish national research priorities for FM research regarding AI. The CFPC would initiate and support the development and dissemination of the research priorities without directly conducting such research.

2. Develop and disseminate a formal statement about the values, value proposition, and principles that are necessary in AI for FM, with equity as an explicit component. This action item would guide development and advocacy. Potential target audiences include researchers, regulators, and developers. Potential collaborators

include the Royal College of Physicians and Surgeons of Canada, Canada Health Infoway, AI institutes, and Health Canada.

3. Support existing initiatives related to developing high-quality primary care data sets suitable for AI. This action item relates to supporting existing data initiatives (rather than developing new ones) to ensure there will be a Canada-wide, integrated data source that is suitable for AI-related FM research. This will require consulting with and learning from CPCSSN, the POPLAR Network, and related initiatives. This may include advocating for data interoperability, standardization, or electronic medical record data “liberation.” Note that in addition to using curated data sets for research, there will be a need to test and learn from implementation of AI tools with “live” dirty data created at the point of care. Identifying and learning from groups with experience in this area could be a secondary output of this leadership initiative.

Box 3 continued on page 167

Box 3 continued from page 166

The final set of 7 candidate action items address more specific activities or events.

4. Support dissemination and discussion of research addressing applications of AI for FM. For example, seeking to publish peer-reviewed articles in *Canadian Family Physician*.

5. Work with the CFPC's Foundation for Advancing Family Medicine to provide funding for small proof-of-concept grants. Grant criteria may be designed to support research that aligns with the CFPC's core values. Secondary outputs of this action item could be to work toward leveraging larger funding buckets (eg, by collaborating with the CIHR) and to better understand private sector and commercial research partnerships.

6. Take a leadership role in the identification and creation of data sets for AI for FM research. This would bring together people who know which data are most ready and accessible now and what would be most useful for FM. Examples of the types of data sets that would arise from this item are Alberta's Tomorrow Project,³¹ Medical Information Mart for Intensive Care,³² and UK Biobank.³³ This is distinct from action item 3, which is about informing large, existing initiatives such as Health Data Research Network Canada.³⁴

7. Initiate and support a national, interdisciplinary community of people interested in AI for FM. This would include support for identifying people with common interests or potential collaborators (eg, connecting AI researchers with CFPC members to advance research) and support for group discussions and knowledge sharing (including researchers and nonresearchers). This would provide avenues for sharing discipline-specific challenges in AI research with other

non-family physicians and researchers and for co-creating AI tools, standards, and processes.

8. Promote FM representation on AI development initiatives. Currently, much AI development is driven by private industry, government, or other entities that could have an impact on FM. Example steps: First, identify at least 3 initiatives where FM representation is needed (eg, CIFAR AI for Health Task Force; Health Canada AI-related regulation initiatives) and, second, connect and support the addition of FM representation (if not already included). In addition to expressing the need to consider unique attributes of FM, these representatives should advocate for the aforementioned value propositions.

9. Develop initiatives to support FM leaders and to build capacity in AI research. This action item includes developing or selecting a specific funding initiative to support emerging leaders (eg, providing funding for family physicians to acquire supplemental training or attend conferences, helping with "matchmaking" for collaborative research projects, expanding physician scholar programs).

10. Support AI-related partnerships within departments of FM. This item is motivated by a need to consider career pathways and to provide support within training, education, and research environments. Artificial intelligence research needs clinical and nonclinical expertise, and nonphysicians can be valuable long-standing members of departments of FM. This action item would aim to increase AI-related research capacity in departments of FM, which may include supporting these departments in brokering connections with AI researchers, start-ups, or others.

AI—artificial intelligence, CFPC—College of Family Physicians of Canada, CIHR—Canadian Institutes of Health Research, CPCSSN—Canadian Primary Care Sentinel Surveillance Network, FM—family medicine, POPLAR—Primary Care Ontario Practice-based Learning and Research.

Conclusion

This report describes work led by a team of CFPC, FM, and AI leaders to support AI for FM research in Canada. The environmental scan identified recent research outlining key considerations and envisioned applications of AI for FM, but few examples of AI-based tools being tested in practice settings were found. The inaugural AI for FM research round-table event engaged experts and leaders to discuss future directions and needs. Based on these activities, the CFPC is working on next steps to support positive progress in the field. Strong FM leadership is needed to support AI research and advancements that will positively transform FM. These innovations need to be centred around FM values, functions, and equity. 🌱

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Contributors

All authors participated in the round table and contributed to preparing the article for submission.

Competing interests

None declared

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