Policy Statement

doctors of bc

Artificial Intelligence in Health Care

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Doctors of BC Position

Artificial intelligence (AI)[1] can empower physicians and enhance the delivery of patient care by reducing administrative burdens and harnessing data to analyze and identify meaningful information. However, without appropriate safeguards, there are considerable risks to the integration of AI tools in health care.

To responsibly and effectively integrate AI in BC's health care system, Doctors of BC calls for:

- Inclusion of physician leadership in multi-stakeholder AI governance and oversight.
- Examination of various AI use cases and development of risk mitigation strategies.
- Pre-market evaluation to assess safety and sustainability, and post-market monitoring to validate the performance and utility of AI tools.
- Robust privacy and security safeguards to ensure patient data is collected and used only for its intended purposes and stored appropriately.
- Transparent data practices, and when possible, model explainability.
- Consideration of information continuity and clinical workflows.
- Consideration of ethical implications related to AI use, such as health equity, accessibility, and its environmental impacts.
- Effective change management, education, and training to support practice changes related to AI adoption.

Doctors of BC commits to:

- Working to advance collaborative, multi-stakeholder AI governance to ensure the perspectives and needs of physicians are reflected in AI initiatives and policies.
- Engaging with health system partners and AI vendors to align approaches and support common goals related to AI in health care.
- Advocating for sustainable funding and iterative vetting processes to support physician choice.
- Providing learning opportunities and guidance to support interested physicians in adopting AI tools.

Background

AI tools are showing significant promise in health care, with applications ranging from AI chatbots and inbox management support, to analyzing medical images and enhancing diagnostic capacity, to providing personalized treatment options (1). Notably, AI scribes have emerged as a powerful tool to help reduce administrative and cognitive burdens and enable more meaningful interactions with patients (2).

Key findings from Doctors of BC's AI Scribes Burden Pilot show a 2.7-hour reduction per week in time spent on administrative tasks by family physicians, while community-based specialists reported a reduction in screen time and the ability to focus more on patient care.

[1] Artificial intelligence: technologies with the ability to perform complex tasks that typically require human reasoning (8).

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Integrating AI tools in health care presents both challenges and opportunities. Ultimately, AI should be viewed as a voluntary tool to help strengthen the health care system, not as a replacement for clinical knowledge and human oversight. This policy statement offers recommendations to guide the responsible and effective integration of AI in BC's health care system.

Analysis

Multi-stakeholder AI governance and oversight

There is a need for collaborative, multi-stakeholder governance to clarify the roles and responsibilities of all parties involved in the development and deployment of AI tools in health care. Participation of diverse stakeholders in AI governance is necessary to outline responsibilities that are proportional to each stakeholder's role and capacity and ensure accountable decision-making and oversight.

Physicians have extensive knowledge and involvement across the continuum of patient care, which offers unique insights to help shape and inform the integration of AI tools in health care. Doctors of BC calls for the inclusion of physicians in governance structures to guide the use of AI in BC's health care system. To advance Indigenous data governance[2] and sovereignty, Indigenous Peoples should be meaningfully involved in AI governance and oversight (3). There should also be opportunities for physicians, medical learners, other health care professionals, and patients to participate in the development of AI initiatives and policies to ensure clinical perspectives and patient needs are reflected.

AI use cases in health care and risk mitigation

Mitigating the risks of AI tools will require collaborative governance strategies, guided by federal and provincial regulatory frameworks. Health Canada's *Medical Devices Regulations* uses a risk-based approach to regulate certain AI tools for diagnosis or treatment purposes (4). However, this framework has not been responsive to the evolving AI landscape. Common AI tools, like scribes and other administrative applications are largely unregulated.

Without thoughtful integration, AI tools present various risks to physicians, including medico-legal risks, privacy and security concerns, and challenge the principles of medical ethics. The ability of adaptive AI to learn new patterns and behaviours makes it difficult to understand and explain how an AI model reached a decision and identify who is accountable for its outcomes. A comprehensive regulatory framework can clarify responsibilities that are currently imposed on physicians to AI developers and vendors, who should be accountable for the design of their products.

Developing appropriate mitigation strategies requires a practical understanding of AI use cases, including their functions, limitations, and potential risks. Given the rapid and evolving nature of AI systems, a range of risk mitigation strategies should be explored to prevent generic guidance being misapplied across contexts. This includes regulatory, as well as nimble, non-regulatory approaches such as industry and practice standards, procurement frameworks, and guidance tailored to specific stakeholder groups. This will help ensure that AI tools are evaluated for safety and monitored to validate the performance and utility of these tools. Risk guidance will also support physicians in making informed choices when adopting AI tools.

Data privacy, protection, and transparency

AI systems are supported by large amounts of data. As algorithms become increasingly sophisticated, sensitive patient health information can be re-identified or accessed by unauthorized users, highlighting the need for robust cybersecurity strategies to safeguard patient privacy (5)

Current privacy legislation in BC does not reflect the complexity and nuances of AI systems. For

[2] The First Nations principles of OCAP®, Manitoba Métis principles of OCAS and Inuit Qaujimajatuqangit describe the rights of Indigenous People to collective control and management of their own data and are critical to Indigenous data sovereignty.

example, BC's privacy legislation does not require transparency in automated processes (6). Without transparent data practices, it is difficult to predict how personal health information will be collected, used, stored, or shared by commercial AI tools (7).

AI also poses practical and ethical challenges for obtaining informed consent (8). Guidance on the informed consent process should be developed, be specific to each tool, and include direction for when implied consent is appropriate (6). When possible, transparency must be supported by explainable AI models to ensure that an AI's decision-making is understandable to the end user. This is particularly important in medicine to foster patient trust.

Information continuity and clinical workflows

The seamless sharing of medical data across devices and platforms is critical for exchanging information, supporting health research, and improving physician experiences in the provision of patient care (9). Consideration should be given to how AI tools will facilitate information continuity to support care and improve clinical workflows and reduce administrative burdens.

Ethical considerations

A primary ethical issue of AI is the risk of algorithmic bias and biased data. Many AI developers rely on shared use databases, which often underrepresent marginalized populations and can lead to inaccurate diagnoses, and substandard care (10). Human biases can also be embedded in the data used to train algorithms (3).

Disclosing an algorithm's training data and providing an assessment of its representativeness can help reduce these risks (11). Health information standards for the creation of representative datasets should be set to mitigate the risk of biased data, support the creation of localized datasets, and improve data quality (12).

There is an opportunity to leverage AI tools to reduce health inequities and bridge accessibility gaps experienced by rural and underserved populations. Application of an equity lens throughout the design, development, and implementation of AI tools will support the responsible integration of AI across BC's health care system.

Consideration should also be given to the environmental impacts of AI tools. Given the significant energy consumption currently required to maintain AI operations and infrastructure, prioritizing environmental responsibility is key to promoting sustainable practices (13).

Effective change management, education, and training

Integrating AI in health care provides an opportunity to learn from the implementation of provincial EMR through applying quality improvement strategies and thoughtful change management. This includes standardized processes, education and training, supportive leadership, clear communication on the objectives, and inclusion of clinicians from the onset. This will ensure that physicians are supported by appropriate resources and infrastructure, that any proposed changes reflect their needs, and are beneficial to patients. AI vendors can also play a valuable role in educating physicians on their products, especially when significant updates are made to their applications.

As AI tools become increasingly integrated in health care, it is important that medical education continue to prioritize clinical judgement and decision-making in physician training.

Conclusion

AI has the potential to enhance BC's health care system for both patients and physicians. To capture its full benefits, multi-stakeholder AI governance and oversight are needed to support physician leadership in informing AI solutions that prioritize clinical expertise, fairly distribute responsibility, and meet the needs of the health care system.

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History

This position builds on the Policy Statements: 2023 *Improving Digital Health Solutions in BC;* 2020 *Governance for EMR Data Used for Secondary Purposes;* and 2020 *Physician Burdens.*

For Further Information

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