Conversations in a changing climate: Embedding environmental history taking into routine care

As climate-related exposures increasingly shape health, routine environmental history taking can help clinicians deliver more precise, preventive, and responsive care.

Miini Minami Teng, MD, MPH, MOT, Sarah B. Henderson, PhD, David McVea, MD, PhD, Rashmi Chadha, MBChB, MScCH, CCFP (AM), FASAM, Malcolm Maclure, ScD, Caroline Stigant, MD, Ilona Hale, MD, FCFP, Tim Takaro, MD, MPH, MS, Videsh Kapoor, MD, CCFP, FCFP

Climate change and environmental determinants of health

Climate change and related environmental determinants are increasingly recognized as major drivers of physical and mental health.[1,2] Exposure to extreme weather, wildfire and smoke, flooding, drought, environmental pollution, and biodiversity loss have all been associated with adverse outcomes. In British Columbia, the 2021 heat dome led to 619 heat-related deaths in a single week, underscoring the urgency of incorporating environmental considerations into clinical care.[3] Seasonal wildfires expose people to high levels of fine particulate matter and other pollutants, worsening respiratory and cardiovascular disease[4] and contributing to increased mortality,[5] such that recurrent wildfire smoke exposure has been associated with an average loss of about 6 weeks of life expectancy in BC.[6] Beyond direct exposures, climate-related events can also harm health through evacuation and displacement, landslides and service disruptions, and shifting infectious disease patterns, with impacts felt inequitably across communities depending on geography, income, baseline health, gender, and other factors.[7,8]

Certain populations are particularly susceptible to environmental exposures, including infants, children, pregnant people, older adults, those with chronic physical and mental health conditions, and those living in poverty.[9] For example, wildfire smoke exposure during pregnancy has been

Dr Teng is a second-year resident in the University of British Columbia Public Health and Preventive Medicine Including Family Medicine Residency Program. She is also a clinical assistant professor in the UBC Department of Occupational Science and Occupational Therapy. Dr Henderson is scientific director of environmental health at the BC Centre for Disease Control and the National Collaborating Centre for Environmental Health. She oversees a broad program of applied research, surveillance, knowledge translation, and training to support evidence-based environmental public health policies, programs, and practices in BC and across Canada. Dr McVea is a senior scientist and public health physician at the BCCDC, specializing in environmental health. He is also a clinical assistant professor in the UBC School of Population and Public Health. Dr Chadha is an addiction physician at Vancouver Coastal Health and a clinical associate professor in the UBC Department of Family Practice. She is the planetary health clinician engagement lead for VCH, is co-chair of Health Quality BC's Provincial Sustainable Clinical Services Working Group, and represents UBC on the Association of Faculties of Medicine of Canada's Committee on Planetary Health. Dr Maclure is a professor emeritus and former BC chair in patient safety research in the Department of Anesthesiology, Pharmacology and Therapeutics in the UBC Faculty of Medicine. Dr Stigant is a nephrologist at Island Health. She created and delivers the UBC undergraduate medical lecture "The Climate Crisis, Planetary Health, and Medical Practice." She is also the medical lead of BC Renal's Planetary Health Working Group, chair of the Canadian Society of Nephrology's Sustainable Nephrology Action Planning Committee, and vice chair of the International Society of Nephrology's GREEN-K Steering Committee. Dr Hale is a family physician and clinical assistant professor in the UBC Department of Family Practice. She is also the medical director for climate change and sustainability at Interior Health. Dr Takaro is a physician-scientist and planetary health lead for the new Simon Fraser University School of Medicine. Dr Kapoor is a clinical assistant professor in the UBC Department of Family Practice and a family physician practising in Vancouver. She is the director of the UBC Faculty of Medicine Family Practice Postgraduate Program's Enhanced Skills Program in Global Health and the global health and planetary health theme lead in the UBC Doctor of Medicine Undergraduate Program.

Corresponding author: Dr Miini Minami Teng, miini.teng@ubc.ca.

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associated with lower birth weight,[10] and extreme heat increases the risk of preterm birth.[11] Children have higher air pollution exposure than adults on a per mass basis due to higher ventilation rates and more time spent outdoors.[12] Susceptibility is heightened among children with asthma, the most prevalent chronic childhood disease, increasing their risk of exacerbations during smoky summer months.[13] Older adults, particularly those without access to air conditioning, with limited mobility, and with heat intolerance from medications, are at higher risk of heat-related illness.[14] From a health equity perspective, those living in poverty and those with mental illness were disproportionately affected by the 2021 heat dome, and they are consistently most affected by other environmental exposures.[15,16]

Considering environmental history as part of clinical history

Integrating environmental questions into clinical history can lead to more refined diagnoses, uncovering links between symptoms and environmental exposures. Such refinement may reduce the use of other, more costly diagnostics.[17] Headaches or fatigue could relate to poor indoor environmental quality.[18] Mental health conditions may worsen during climate-related disasters.[19] Chronic kidney disease can progress more rapidly with higher ambient heat exposure.[20] In addition, clinicians sharing their concerns about climate change and its health impacts can strengthen patient relationships and empower preparedness.[21] Physicians play a key role in shaping public perceptions about climate change, often exerting greater influence than other sources.[22]

How to incorporate environmental history

Health care professionals develop deep understandings of the communities they serve. Knowledge of traditional food sources, sacred places, regional industry and employment, and natural features is key to tailoring an informed environmental history and therapeutic plan. Several tools support environmental history taking in clinical practice. The mnemonic CH2OPD2 (community, home, hobbies, occupation, personal habits, diet, and drugs) is a tool to identify a patient's history of exposures to potentially toxic environmental contaminants.[23] Pediatric-specific resources, like the World Health Organization's Paediatric Environmental History tool, help clinicians screen pediatric patients for air quality, heat, and allergens.[24] For disaster-specific readiness, the Climate Resilience for Frontline Clinics Toolkit from the Center for Climate, Health, and the Global Environment at the Harvard T.H. Chan School of Public Health offers heat- and wildfire-focused tools for vulnerable populations.[25] The adaptation presented here synthesizes these approaches into practical, accessible clinical prompts that can be used at the point of care.

Once a patient's presenting problem has been established, clinicians may want to elicit an environmental history of the presenting illness. For example, ask patients if there are any pollution sources near them, such as factories, highways, or other industrial activities; whether their symptoms are affected by the weather, air quality, or wildfire smoke; and about their occupations and job tasks. Answers to these questions can uncover associations between exposures and illness.

The **Table** provides several adaptable approaches for incorporating an environmental context into clinical history taking.[23,25-27] Clinicians may use a brief targeted environmental review of systems when time is limited or apply life-stage, seasonal, and community-context lenses to guide more anticipatory or equity-oriented screening.

The clinical impression should include items from the history that are pertinent to the illness(es) being treated. Environmental considerations should be integrated into the treatment plan if relevant, addressing factors such as exposure to pollutants, heating and cooling methods, ventilation, and water sources that may impact the patient's health.

Resources for BC clinicians

The BC Centre for Disease Control offers clinical guidance tool kits for extreme heat and wildfire smoke exposure, along with tips for effective communication,[28,29] public resources about wildfire smoke and extreme heat, and a guide to building do-it-yourself air cleaners. The Air Quality Health Index provides hourly updates about current conditions,[30] and the national AQmap (https://aqmap.ca) integrates data from a growing network of low-cost air quality sensors. PreparedBC has multiple resources for disaster preparedness, including for extreme heat events, that can be shared with patients.[31] Additionally, environmental recommendations can be supported through formal prescribing pathways. For instance, air filtration or cooling supports can be prescribed where indicated,[32] and clinicians can use programs such as PaRx to prescribe access passes to public parks in BC, facilitating equitable access to nature-based health benefits.[33]

Conclusions

Environmental history taking is an emerging, resource-conscious approach that may improve diagnostic clarity and preventive care, particularly in the context of extreme environmental exposures and climate-related emergencies. When included with a robust occupational and social history, the clinician can be more targeted in using diagnostic tests and gain insights into disease mechanisms to improve treatment. While more research is needed to quantify their cost-effectiveness, using frameworks like the BC Lifetime Prevention Schedule or time-needed-to-treat models,[34,35] environmental histories offer a structured way to identify potentially modifiable exposure risks without requiring additional tests or equipment. Incorporating these conversations into clinical care can strengthen relationship-based care and empower patients to prepare for and mitigate environmental health risks in the changing climate. ■

Competing interests

None declared.

TABLE. Suggested approaches for environmental history taking. Components of an environmental history relevant across the lifespan, incorporating life-stage, seasonal, and Indigenous lenses.

Environmental history approaches	Sample questions
Targeted review of systems	• Have you recently been exposed to extreme heat, wildfire smoke, chemical air pollution, or flooding? • Do you use air filtration at home? • Do you have air conditioning at home? • What protections do you have in place in the event of extreme heat or air pollution? • Do you or your household have an emergency plan at home and/or an evacuation plan? • What types of things are you exposed to at work? Is your personal protective gear tested regularly to ensure it functions properly? • Is your workplace adequately ventilated? Do you find it stuffy at home or at your workplace?
Alternative review of systems (connection to food, water, air, and land)	• Do you get your home drinking water from a community system or private well? • Do you experience seasonal allergies or breathing difficulties? • Do you live near a busy road or industrial site? • Do you have access to a park or other green space? • Are there water restrictions in your community (either seasonal or year-round)?
Home and community environment	• Are you housed? • How old is the building where you live? • What is your primary source of heating? • Do you have a central or portable air conditioner? • Is your cooking appliance gas or electric? • Do you live near a significant source of noise or air pollution?
Life-stage considerations	• Pregnancy: Clean air, cooling, food security, prenatal health care disruptions. • Infants and children: Indoor environmental quality, respiratory symptoms, food security, safe housing. • Adolescents: Eco-anxiety, missed school during disasters, food security. • Adults: Occupational exposures, income, worsening chronic diseases, housing stability. • Older adults: Income, cooling access, social supports, access to food, emergency planning. • All ages: Heat-sensitive medications (e.g., diuretics, beta-blockers, anticholinergics, psychotropics), adequate rescue medication supply.
Seasonal lens	• Winter: Is your home adequately heated? Do you have joint pain or cardiovascular symptoms in the cold? • Spring: Do you have pollen or seasonal allergy symptoms? • Summer: Do you have symptoms during heat waves or on poor air quality days? • Fall: Do your mental health symptoms worsen with the days getting darker?
Indigenous lens	• Have environmental events affected your ability to be on the land or partake in ceremony? • Are traditional food sources or medicines harder to find or less abundant than they once were? • Has habitat loss led to food insecurity?

Adapted from various sources.[23,25-27]

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Understanding the realities of care

Findings from a 2025 ICCC survey of current participants further underscore these dynamics. More than 80% of respondents reported traveling long distances, often more than 4 hours, to deliver care. Many serve predominantly Indigenous patient populations within team-based models of care.

The survey also reflects a strong commitment to culturally informed care. More than half of the respondents reported incorporating Elders, Knowledge Keepers, or traditional wellness providers into their practice. Many also integrated traditional approaches alongside Western medicine, reflecting principles such as Two-Eyed Seeing.

At the same time, physicians identified ongoing challenges, including professional isolation, emotional strain, and systemic barriers. These insights reaffirm the importance of connection and support for those working in complex and underserved settings.

Advancing practice through connection

Within this context, the ICCC provides a trusted space for open dialogue, mentorship, and mutual support among physicians navigating similar complexities. Physicians describe their work as both a privilege and a responsibility, supporting communities that have experienced significant harm within colonial systems while working to improve care experiences within.

At its core, the ICCC is rooted in relationships between clinicians, with communities, and across the health care system. It reflects a simple but critical understanding: supporting those who provide care is essential to advancing culturally safe and antiracist health care systems. ■

To learn more about the ICCC, email isar.edi@doctorsofbc.ca.

—Terri Aldred, MD, CCFP
Family Physician, Co-Lead, Indigenous Clinical Care Circle

—Lester Todd Alec, MD, CCFP
Family Physician, Co-Lead, Indigenous Clinical Care Circle

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