



The Role of Nursing in Climate Change

Actions for Nurses in a Changing World



What is climate change?

Climate change refers to the long-term increase of global temperatures primarily expedited by human activity.¹ Currently, more than 90% of the world's population breathe unsafe levels of air pollution caused by the large-scale burning of fossil fuels which release greenhouse gas (GHG) emissions into the atmosphere.² In addition to the use of fossil fuels for industry, manufacturing, energy, and transportation, other human activities such as agriculture and land use also generate large quantities of GHGs. These GHGs are the single main contributor to atmospheric warming and the climate crisis.³

How does climate change affect human health?

Climate change-induced extreme weather events directly and indirectly affect human health. Increased temperatures and heat domes lead to heat stress and heat stroke, and can aggravate heart, lung, and kidney conditions. Wildfires and the ash they produce can cause physical burns, cardiorespiratory problems, long-term breathing issues, and death. As well, floods and landslides caused by increasing temperatures and melting ice mass can cause drownings, hypothermia, dismantled infrastructure, poor water quality, increased spread of vector-borne disease, and death. The fear and anxiety of these types of events occurring around us can exacerbate and even lead to mental health problems such as depression, anxiety, post-traumatic stress disorder, and more. Indirectly, climate events lead to food insecurity, forced displacement of communities, malnutrition and undernutrition, poverty, inequality, conflict, and much more.

What can nurses do?

As trusted health experts, nurses play a vital role in helping communities adapt to climate change and advocating on behalf of patients and the environment for a more sustainable future. Nurses work closely with the communities they serve, sometimes as the only health care professional in the area. As such, nurses must assess the ways in which climate change may affect the health of individuals within their environment and inform the community on how best to prepare for climate-induced events. As leaders in the community and leaders in health care, nurses have a strong and valuable voice. By enacting sustainable practices and advocating for a more climate-resilient future, nurses can initiate meaningful action right now.



Start a workplace green team

Green teams advocate for environmental sustainability and focus on creating awareness through education and initiatives.⁴ Green teams are a great way to bring together like-minded individuals to brainstorm different initiatives and campaigns within the workplace. As nurses work in all sectors across the health care system, nurses are ideally positioned to organize and lead diverse green teams in a variety of areas.

Typically, green teams start out by focusing on one or two actionable areas such as waste management, utilities management, transportation, or sustainable food production. Consider:

- 🌱 Place recycling and recyclable-sorting bins in high-access areas where garbage bins are present
- 🌱 Conduct a workplace garbage and recycling audit
- 🌱 Implement a recycling and/or composting program
- 🌱 Promote going paperless or printing double-sided when necessary
- 🌱 Turn off lights and unplug small appliances when not currently in use
- 🌱 Restore and donate old and unused materials and equipment
- 🌱 Reuse where applicable – promote the use of glass and steel food and beverage containers
- 🌱 Ensure that heating, ventilation, and air conditioning (HVAC) units are well-maintained and running optimally
- 🌱 Replace old light fixtures with high-efficiency bulbs
- 🌱 Run a green transportation campaign
- 🌱 Grow a workplace garden that produces fresh, seasonal vegetables



Green teams often start small. Evaluate the needs of the workplace to determine what options may be best for that environment.

Talk to patients and clients about climate change

As trusted health care professionals, nurses play an essential role in educating and informing patients and the public about critical health issues. Climate change-related health issues are imminent and occurring more and more frequently each year. The World Health Organization (WHO) states that climate change is the 'single biggest health threat facing humanity' and is expected to cause 250,000 additional deaths per year between 2030 and 2050.⁵

By having conversations directly with patients and their families, sharing reading materials, and directing the public to science-based resources, nurses can bring awareness to climate change and normalize it within the health care context. Through this individualized approach, nurses can aid patients in understanding their own vulnerabilities to climate change as well as that of those around them. Consider:

- 🌱 Hold periodic climate change and health learning sessions and invite patients to make an appointment or join a webinar to learn more
- 🌱 Share educational materials in a greener format – only print when necessary on recycled paper, or on 'seed paper' that can be planted in the ground
- 🌱 Add notes and memos to the calendar as a reminder to speak with patients about upcoming extreme weather events such as wildfires, heat waves, heavy rainfall leading to flooding, etc.
- 🌱 Create a climate change section on the workplace website or share climate change news and information through social media
- 🌱 Speak with patients about the importance of mental health in a climate-changing world
- 🌱 Discuss climate change and its effects on human health regularly as part of workplace team meetings to normalize the language



Speaking with patients and clients about climate change can start out small. Begin to normalize the language of climate change and draw connections between climate events and human health.

Advocate for equity and sustainability

Climate change affects the health of all, but it disproportionately affects some populations. Within Canada, Indigenous peoples, the elderly, women, children, those who are socially isolated or live in rural or remote communities, those who are housing insecure, and those with underlying medical conditions are at increased risk of developing various health conditions as a result of climate change.⁶ Already due to a changing climate, many of these groups and individuals face food, water, and housing insecurity, as well as displacement from their homelands and traditional ways of life.

Advocating for equity and sustainability includes speaking regularly about the realities of climate change, informing others about the disproportionate impact on some communities, discussing options for solutions, and appealing to government and policymakers for change. Consider:

- 🌱 Research the impacts of climate change on vulnerable persons in local, regional, and broader communities
- 🌱 Convene colleagues, other health care professionals, and the public to discuss climate change and the social and environmental determinants of health – brainstorm potential actions and solutions
- 🌱 Share information about climate change inequities through all modes of communication, including social media
- 🌱 Speak to local politicians and policymakers about climate change inequities and sustainability challenges in the local area
- 🌱 Learn to accurately recognize and respect the local territories, lands, peoples, and all life in the natural environment
- 🌱 Promote the transition away from fossil fuels toward renewal resources that do not take the same harsh toll on the environment and the peoples within it
- 🌱 Advocate openly for vaccine equity and participate in making vaccines more accessible to vulnerable populations and rural and remote communities
- 🌱 Inform others about the social determinants of health and advocate for greater investment into rural and remote health, and accessible and appropriate public health services to underserved communities



Nurses play an important role in helping all people adapt to climate change. Advocating for those who are disproportionately affected by climate change is crucial to moving forward in a climate-changing world.

Encourage greener choices as part of a healthy lifestyle

Nurses believe in caring for the whole person at all stages of their health care journey throughout life. Nurses promote all forms of health and wellness, whether it be physical, mental, emotional, spiritual, or other. As such, nurses understand the importance of making healthy lifestyle choices that can have a positive impact for both the individual and the environment.

Nurses also understand that due to social and environmental determinants of health, some greener lifestyle choices are easier for some than others. As climate change disproportionately affects some populations, it is important to recognize each individual's position and to make recommendations accordingly. It may not be feasible or appropriate to encourage some lifestyle choices in all situations. Through individual counsel with patients and clients, consider:

- 🌱 Investigate the environmental toll of producing, packaging, and shipping out-of-season fruits and vegetables – rather, encourage others to enjoy seasonal produce that supports rural communities and does not harm the health of farmers or those along the production line
- 🌱 Change up the commute – walk or cycle to work or school, or try carpooling or public transportation
- 🌱 Pack meals eaten away from home in reusable glass or stainless-steel food and beverage containers rather than purchasing meals out
- 🌱 Implement a 'meatless-Monday' to reduce consumption of red meat, also a large emitter of greenhouse gases
- 🌱 Choose fish and seafood options that are not overfished, do not harm Indigenous fish species, and do not impede the livelihoods and traditional ways of Indigenous communities



There are many ways to make greener choices. With forethought for the environment, little changes can create sustainable impact.

Develop a Climate Action Plan for the local area

As leaders in health care, nurses add a strong and valuable perspective in decision-making and change-making circles. By nature of the nursing profession, nurses understand complex scientific information and use this knowledge to provide quality, compassionate, and person-centred care. This combination of skills is unique to the nursing profession and makes nurses ideal leaders in developing pragmatic solutions to real-world problems.

A Climate Action Plan is a multi-sector venture that measures and tracks current greenhouse gas emissions within a particular area, outlines reduction targets, details specific actions and strategies, and holds a community accountable for enforcing climate change. Consider:

- 🌱 Learn more about greenhouse gas targets and review ways to reduce regional emissions
- 🌱 Conduct an audit of current greenhouse gas emissions across sectors and consider achievable reduction goals
- 🌱 Speak with nursing colleagues and allied health professionals to gather wider-scale perspectives on implementing climate change plans within health care
- 🌱 Conduct a community waste management audit
- 🌱 Speak with management and hospital administration to implement a series of green changes with the goal of working toward carbon neutral operations
- 🌱 Review workplace space management allocation versus actual needs to detect excess energy use
- 🌱 Communicate actively with city councils, participate in community calls for feedback, and suggest actionable solutions to ensure the nursing voice is present at decision-making tables



Nurses play an important role in helping communities adapt to climate change and contributing valuable insight into developing strategic action plans.

Plan for emerging needs in a climate changing world

Nurses can expect to see an increase in illness caused by climate change in the years ahead. As nurses promote and support health and wellness, nurses have a professional responsibility to educate and inform patients and clients about climate change impacts on health, and to investigate, advocate, and implement sustainable policy and practice.⁷ In doing so, nurses can reflect upon previous and ongoing climate change impacts, plan for emerging needs, and prepare patients for potential and imminent climate change events.

There are several ways to prepare for the future in a climate changing world. Consider:

- 🌱 Speak with patients about their individual health care needs and discuss potential action plan options and self-preparedness in the case of an extreme climate event
- 🌱 Work with government, allied health professionals, and other emergency responders to identify vulnerable populations and determine emergency response plans for various scenarios
- 🌱 Evaluate workplace readiness in the case of an emergency event – consider supplies, human resources, space allocation, knowledge acquisition, and more
- 🌱 Discuss climate change and mental health with patients, acknowledge anxieties and post-traumatic stress, and provide resources and options moving forward
- 🌱 Keep up to date with evolving science and information through personal research of reliable and peer-reviewed materials, educational courses, online databases, and more
- 🌱 Speak with patients, family members, neighbors, friends, and colleagues about action plans and build an emergency response network



Preparing for future climate events is fundamental in today's world. Through ongoing discussion, education, and planning, nurses can help to prepare those around them for emerging and imminent health care needs resulting from climate change.

Join a larger network

Climate change is an immediate global problem with immense repercussions on human health. Nurses know that climate change has already had a profoundly negative effect on human health, and it is only expected to worsen in the years to come. As rising temperatures and extreme weather events continue to occur due to greenhouse gas emissions expedited by human activity, it is essential to make changes now. Nurses understand this impending threat and are key to leading change for the future.

Luckily, nurses are already building groups and networks to lead the change and invest in a more climate-resilient future. Through research, advocacy, networking, education, and compassionate care, the nursing profession demonstrates its vital role in addressing climate change.



#NursingKnows

Find resources

- 🌱 [NNPBC Issues Brief: Nursing and Climate Change: The Impacts on Human Health](#)
- 🌱 [NNPBC Blog: Climate Emergency: The Time to Act is Now](#)
- 🌱 [NNPBC Blog: Nurses for Planetary Health: A Call to Action](#)
- 🌱 [NNPBC Climate Change Webinar Series](#)
- 🌱 [Canadian Association of Nurses for the Environment \(CANE\)](#)
- 🌱 [Canadian Nurses Association \(CNA\): Climate Change and Health in Your Nursing Practice](#)
- 🌱 [Canadian Nurses Association \(CNA\): Climate Change and Health Position Statement](#)
- 🌱 [Understanding Climate Change in Nursing Practice: An Educational Tool for Nurses](#)
- 🌱 [Canadian Federation of Nurses Unions \(CFNU\): Climate Change and Health, Discussion Paper](#)
- 🌱 [Canada's Changing Climate Report 2019](#)
- 🌱 [International Council of Nurses \(ICN\): Position Statement on Nursing Leadership and Climate Change](#)
- 🌱 [World Health Organization \(WHO\): Climate Change](#)

Endnotes

- 1 United Nations. ['What is Climate Change?'](#) Accessed 2022.
- 2 World Health Organization (WHO). ['Climate Action: Fact Facts on Climate and Health.'](#) Accessed 2022.
- 3 Bush, Elizabeth and Lemmen, Donald S., editors. Government of Canada. ['Canada's Changing Climate Report, 2019.'](#) 2019.
- 4 Law, Joanna. Canadian Assn of Nurses for the Environment (CANE) and Canadian Coal. for Green Health Care (CCGHC). ['Health Care Green Teams in Canada: A National Picture'](#) [video]. 2021.
- 5 World Health Organization (WHO). 'Climate Change and Health.' October 30, 2021.; World Health Organization. ['Climate Action: Fact Facts on Climate and Health.'](#)
- 6 Martin, Wanda and Vold, Lindsey. Canadian Federation of Nurses Unions (CFNU). ['Climate Change and Health: It's Time for Nurses to Act.'](#) June 2019.; Canadian Association of Physicians for the Environment (CAPE). ['Climate Change Toolkit for Health Professionals: Factsheet: Global Health Impacts of Climate Change.'](#) April 2019
- 7 Canadian Nurses Association (CNA). ['Position Statement: Climate Change and Health.'](#) June 2017.; Leffers, Jeanne, McDermott Levy, Ruth, Nicholas, Patrice K, and Sweeney, Casey F. ['Mandate for the Nursing Profession to Address Climate Change Through Nursing Education.'](#) Journal of Nursing Scholarship 49(6). November 2017.