

Nurses' Role in Addressing Global Climate Change, Climate Justice, and Health

Purpose

The World Health Organization (WHO) recognizes *climate change* as “the single biggest health threat facing humanity” (WHO, 2021). An editorial published in 200 leading medical journals, including *The Lancet*, the *New England Journal of Medicine*, and the *British Medical Journal*, agreed with the opinion of the WHO, stating the world cannot “wait for the COVID-19 pandemic to pass before addressing climate change” (Sommer, 2021; Gaines, 2022). The United Nations Intergovernmental Panel on Climate Change (IPCC) reports confirm the urgency of now. If we do not rapidly and effectively decrease greenhouse gas emissions, feedback loops will contribute to further climate instability, making it more difficult to mitigate and adapt to climate change. This will have devastating consequences for all life on the planet. As advocates for the health and safety of individuals and communities, nurses have vital roles to play in addressing this global issue and its consequences on human health and all life on Earth. The American Nurses Association (ANA) acknowledges climate change is but one of many urgent health crises at this time, but nurses must be informed about the deep interconnection of human health and the health of the environment. Many of the actions called for in this statement will help address the human-caused disruptions to the Earth’s natural systems. This position statement is a call to action and guidance for nurses in all settings and specialties.

Statement of ANA Position

The ANA recognizes that climate change is a critical public health issue that requires urgent action to mitigate its impact on human health and well-being. Nurses are called upon to integrate the science of climate and health into nursing education, research, and practice and to work with other health care professionals, community organizations, and policymakers to address the multiple health consequences of *environmental degradation*, extreme weather events, and other *climate-related health impacts* with evidence-based *mitigation* and *adaptation* actions, programs, and policies.

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Note: This position statement reflects ANA’s adoption of the *Precautionary Principle* and strives to encourage our profession to be proactive and responsive to the environmental changes and climate-related events we see happening around the globe. Additionally, it is important to be a part of generating solutions to the effects of those changes on the health outcomes of our patients.

Background

Anthropogenic (human-caused) climate change is occurring because of harmful pollutants, overconsumption, and other human actions that emit millions of tons of *greenhouse gases* into our atmosphere each day (IPCC, 2023). These gases trap heat in the atmosphere, and over time, this has caused gradual but steady warming of Earth’s average temperature. The resulting global warming is causing significant changes, many of which put human health at risk. In 2015, the Paris Agreement was established when the world’s nations agreed to limit warming to 2.0 degrees Celsius, with efforts to keep it below 1.5 degrees (United Nations, 2015). As of 2023, scientists have reported that we are likely to surpass 1.5 degrees warming in the early 2030s or sooner (IPCC, 2023; World Meteorological Organization, 2023).

There are several [greenhouse gases](#) that retain heat in our atmosphere. The most common is carbon dioxide, and the biggest source of carbon dioxide pollution is the combustion of fossil fuels, such as natural gas, gasoline, oil, propane, jet fuel, and diesel. Other greenhouse gases include methane and health care’s commonly used anesthetic agents: nitrous oxide and fluorinated gases (Environmental Protection Agency [EPA], 2023a). For the sake of convenience, scientists often convert all to a carbon dioxide equivalent, CO₂e, and refer to these as greenhouse gases, or sometimes as carbon.

Climate change is having significant impacts on human health today and is projected to worsen over the coming years (Centers for Disease Control and Prevention [CDC], n.d.). Acute and chronic conditions can be worsened by extreme heat, wildfires and wildfire smoke, flooding, extreme storms, more intense allergens, and an increase in vector-borne diseases such as malaria and tick fevers. Climate change impacts mental health through added stress, anxiety, and depression. Social stress can increase with intolerable weather events and destruction from storms and fires. Managing serious mental illness in vulnerable populations can be challenging during extreme events. Vulnerable populations, including developing and marginalized nations,

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the very young, the elderly, people with chronic diseases, unhoused individuals, people of color, people living with poverty, LGBTQ+ communities, and individuals and groups excluded from decision making about important impacts on their lives, are more likely to suffer the consequences (EPA, 2022).

The nursing profession has always known the important role it plays in addressing the issues of climate change. In 2008, ANA was one of the first health organizations to take the lead on climate change when it acted with its [House of Delegates Resolution on Climate Change](#). It recognized and publicly acknowledged that the challenges faced because of global climate change are unprecedented in human history, and it is critical that nurses speak out in a united voice and advocate for change on both individual and policy levels. ANA also has encouraged constituent member associations (C/SNAs) to support local public policies that endorse sustainable energy sources and reduce greenhouse gas emissions.

[In a 2018 policy statement](#), the American Academy of Nursing noted that nurses play essential roles in public health and emergency services, and through this work, they can respond to and reduce health consequences of climate change (Leffers & Butterfield, 2018). In that same year, the [International Council of Nurses \(ICN\) Position Statement on Nurses, Climate Change and Health](#) stated that “leadership from nurses to take immediate action to build climate-resilient health systems is necessary” and called on national nurses’ associations to “raise awareness of the health implications of climate change and how to assess and address climate change risks to health by developing policy documents on the subject” (ICN, 2018).

Representatives at the 2022 ANA Membership Assembly voted to reaffirm ANA’s commitment to addressing the impacts of climate change on public and population health, including through the following actions:

- Revise and establish as an official position the 2008 House of Delegates Statement on Global Climate Change and Human Health.
- Promote nursing knowledge on the relationship between climate change and public and population health at the ANA, C/SNA, and Individual Member Division (IMD) levels.
- Develop Healthy Nurse, Healthy Nation™ challenges that focus on climate-friendly healthy actions.
- Encourage integration of information on the impact of climate change on health in nursing school curricula.

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- Establish partnerships between ANA, C/SNAs, and IMDs at the national and state levels with other organizations already active in climate change and health.

Finally, our profession’s foundational documents, the *Code of Ethics for Nurses with Interpretive Statements (The Code)*, *Nursing Scope and Standards of Practice*, and *Nursing’s Social Policy Statement*, each remind nurses of our commitments related to the environment and health. This includes advocating for policies and practices that prioritize health and safety in a changing climate, protecting the rights and dignity of individuals and communities impacted by climate change, promoting *environmental justice* and equity, integrating knowledge of climate change’s impacts on health into nursing practice, conducting environmental risk and exposure assessments, and collaborating with interdisciplinary teams and stakeholders to develop and implement strategies for climate mitigation and adaptation. Communities and countries that contribute the least to greenhouse gas emissions are frequently the ones to suffer first and worst. We therefore acknowledge that mitigation strategies must reflect a commitment to equity and *social justice*.

Mitigation and Adaptation

Nurses, both individually and as a profession, respond to human health needs while preparing for conditions that optimize just and equitable access to health care by creating conditions for health and thriving. In the face of climate change, nurses must act similarly—to respond to the immediate needs while preparing and planning for better long-term outcomes. When discussing climate change, two words are often used—mitigation and adaptation—and both present opportunities and obligations for nurses.

Mitigation refers to actively reducing or removing greenhouse gas emissions in the atmosphere, thereby decreasing ongoing warming and lowering risk for humans and other species.

Mitigation actions include using fewer fossil fuels, which are the primary source of our greenhouse gases; changing agricultural practices to emit fewer greenhouse gases; reducing carbon pollution (*decarbonizing*) from organizations and industries; creating less waste; using less carbon-intensive waste treatments; and many others.

Health care around the globe is carbon-intensive, accountable for 5.2% of global carbon emissions (Romanello et al., 2022) and 8.5% of emissions in the United States (Eckelman et al., 2020). Nurses, as the single-largest health profession, with 28 million nurses globally representing almost 60% of health professionals (WHO, 2020) and over 5 million in the United States (National Council of State Boards of Nursing, 2023), can and should help decarbonize

health care. Nurses are in almost every health care setting, they are often in positions of leadership and influence, they are expert problem solvers, they understand and manage health care operations, and they are skilled at designing better processes and policies to advance mitigation strategies in their practice areas.

Adaptation refers to responding to conditions that are already changing. This includes, but is not limited to, adjusting to higher or lower temperatures, more drought or more rain, worse storms, more allergens, more hazardous toxic chemicals and pollutants, more vector-borne illnesses, and the stress and subsequent mental health conditions many experience as a result of these changing conditions. Nurses need to adapt too, by learning more about these changes and applying this knowledge to our understanding of health, healing, *wellness*, and palliation. Nurses can help their communities prepare for and respond to wildfire smoke, flooding and tropical storms, and other severe weather-related events. Nurses can help teach patients and families about how heat, mold, or smoke impacts their health and how to protect themselves.

Recommended Nursing Interventions

The Research, Education, Advocacy, and Practice (REAP) Framework (Schenk, 2016) can be applied to identify nursing interventions that advance equitable climate solutions. Nurses can participate in climate-smart health care and support climate-smart policies in their places of employment, in affiliated organizations, and in government, as well as in their homes and communities.

In professional settings (e.g., health care institutions, other practice settings, and schools of nursing), nurses can:

- Educate patients and the public about climate change effects and mitigation strategies.
- Model and promote strategies to reduce as well as respond to the impacts of climate change (Leffers & Butterfield, 2018).
- Ensure that health institutions prioritize the nursing workforce and capacity as a component of disaster/climate adaptation preparedness.
- Advocate for a robust public health infrastructure and public health nursing workforce that is trained in how to care for those impacted by climate-related health impacts.
- Support the *decarbonization* of the health sector by advocating for initiatives and policies that reduce carbon emissions within health institutions, otherwise known as climate-smart health care. Examples, although not exhaustive, are reducing waste,

diverting waste away from landfills and hazardous streams, supporting forms of transportation with low to no greenhouse gas emissions (carpooling, public transit, transitioning away from fossil fuel vehicles), effectively capturing and preventing waste anesthetic gases using environmentally preferred purchasing strategies, and supporting the transition to responsible renewable energy while reducing overall energy use.

- Advocate for systemwide leaders and health care administrators to commit to decarbonizing health care delivery and making measurable progress.
- As nursing leaders, recognize the responsibility of the nursing profession to address pollution caused by nursing practice, product selection, and policies. Leaders can establish goals, metrics, and improvement plans to reduce this harm.
- Integrate climate and sustainability content and discourse (e.g., on waste reduction, energy/water conservation, climate leadership) in nursing curricula at all levels.
- Address *advocacy*- and practice-related implications for a healthy climate as an important function within school of nursing curricula (American Association of Colleges of Nursing [AACN], 2021).
- Support nursing research and innovation to address climate change and climate justice.
- Listen to and partner with Indigenous Americans on planet-friendly living.
- Collaborate across sectors and with communities to address climate and environmental health issues.
- Act with a “level of urgency proportionate to the scale of the threat, adhering to the best available science, and practicing clear and consistent communication” with all stakeholders (Watts et al., 2021, p. 129).
- As health care organizational nursing leaders, create opportunities for nurses to decrease the environmental impacts of their practice areas.
- As health care organizational nursing leaders, advocate for actions that reduce greenhouse gas emissions in health care delivery and for decisions about purchases, policies, and practices to be made with a lens of equity, reducing harm and ensuring climate justice.

In public policy and government, nurses can:

- Consistently advocate on behalf of the marginalized, underserved, and historically deprived by incorporating understanding of social and environmental determinants of health into advocacy work efforts and results.

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- Advocate for policies that advance just and equitable climate responses in public health and health care, and direct adequate resources to communities that are overburdened by climate-related conditions, such as those marginalized by race, gender, poverty, ability, etc., and therefore bear disproportionate burdens of toxic waste from industries and climate-related consequences.
- Support and encourage nursing organizations to participate in multidisciplinary efforts to advance climate action and disaster preparedness.
- Promote partnerships among health care institutions, health departments, communities, and the government in both mitigation and adaptation efforts.
- Advocate for research funding to support academic settings to integrate climate and health into nursing curricula.
- Engage at the federal level with the Department of Health and Human Services and Office of Climate Change and Health Equity by elevating the role of nursing in agency programming on climate.
- Serve in public office, in leadership, on board seats, and in local governing bodies to promote climate change and climate justice interventions, support environmentally safe and healthy practices, obtain funding, and serve on appropriate key committees.
- Enhance knowledge of the political system and encourage engagement with the public process.
- Participate in local and national climate change and climate justice discussions to share evidence-based information and to enhance knowledge of advocacy efforts and actual work transpiring to mitigate and adapt to climate change effects in all communities.

Professional nursing organizations can:

- Educate members on how climate change contributes to the causes of illness and can negatively impact treatment. The effects exacerbate ongoing challenges such as inappropriate staffing, patient safety, infectious disease response, mental health, and the availability of supplies and medication (Langan & Krieger, 2019).
- Collaborate with grassroots organizations conducting environmental and *eco-justice* assessments, and advocate in the communities in which their constituents live and the specialty areas in which they work.
- Support policies that reduce greenhouse gas emissions, promote climate-resilient communities and health care, and protect against current and future climate health threats.

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- Be familiar with climate justice frameworks that address the ethical and human rights issues that occur because of climate change (Nicholas & Breakey, 2017).
- Collectively amplify the voice of nursing to strengthen the influence nurses have on climate legislation and policy.

Innovation and Research

The [Third National Climate Assessment](#) identified several research goals. These include better understanding of climate change and its drivers, impacts, vulnerability, and adaptation methods, as well as finding mitigation strategies for longer-term climate change and enhancing decision-making tools and information for policymakers. The [EPA](#) recommends research on prevention and transformation of “air quality, tools, community resilience, ecosystems, energy transformation, human health, water quality, and wildland fires” (EPA, 2023b). However, research also needs to include investigating and preventing any negative unintended human/animal/plant/environmental consequences from seemingly positive climate change policies, programs, and actions.

Nursing research has historically been underfunded (Kiely & Wysocki, 2020) and not always clearly understood (Tingen et al., 2009). Nurse researchers, however, have the education, interest, practical knowledge, and passion to improve human health, particularly as it relates to climate change and climate justice. Nurse researchers are an asset to interdisciplinary research teams as well.

Programs and incentives are needed to spark interest and funding for research and innovation on climate change and climate justice, particularly at the local, state, and federal levels. Innovation is particularly needed to ensure that climate change solutions are equitable and effective for all people, not only those individuals, communities, and nations that can afford them. ANA has developed [ANA Enterprise Innovation](#), a platform to support and promote nursing innovation across the nation. Several nurse climate change innovators have emerged from this new platform.

Nurses as Sources of Hope

Nursing is uniquely positioned to create and lead changes to mitigate the impacts of climate change and to protect vulnerable individuals, families, and communities through adaptation. Our profession is ethically bound to this work. Interpretive Statement 9.4 of *The Code* (ANA, 2015) provides a firm foundation for equity and guidance for interventions rooted in climate justice. Our ethical *compartment* is consistently recognized by the public, as evidenced by our selection as the most trusted profession year after year according to the Gallup poll (Brenan, 2023). We bring hope because people trust us to speak truthfully, act ethically, and advocate on their behalf.

Historically, the nursing *metaparadigm* has included the environment, so nurses do not have to adopt a new worldview to grasp the interconnection between human health and the health of the planet. The awareness that nurses are allies in the work of climate justice brings hope to many, as nurses are viewed as trusted voices who can promote the cultural and structural changes that are necessary at this time.

Nurses are expert systems thinkers. We grasp relationships and interconnections of elements both internally and externally. From the function of cells to the function of Earth's natural systems, nurses know that humans are deeply interconnected and part of the entire ecosystem. We recognize that what we do to one part of the system has direct consequences on other parts. This holistic orientation positions nurses to grasp the impact of social, structural, and environmental determinants of health.

Nurses are relationship experts. From relationships with patients to relationships with lawmakers, we understand that transformative change starts and ends with respectful, collaborative partnerships. Climate change and other global challenges will not be solved by one discipline acting alone. We must form relationships across disciplinary, geographic, and demographic boundaries. Nurses recognize that systems solutions require cross-system engagement. This transdisciplinary approach offers hope that our climate solutions will match the urgency and scale of the crisis.

As the professional association for all registered nurses in the United States, ANA exists to advance the nursing profession by advocating on health care issues that affect nurses and the public. Additionally, ANA aims to foster high standards of nursing practice, promote a safe and ethical work environment, and bolster the health and wellness of nurses. *Planetary health* and the effects of climate change are pressing issues that directly impact the health of our patients, communities, nursing practice, nursing *ethics*, and work environments. The intensity and

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frequency of climate-related crises continues to accelerate, and our profession has an ethical obligation to work vigorously to address, mitigate, and adapt to its causes and effects. Collective nursing organizations have a unique opportunity and must leverage their advocacy on local, state, and national levels and support the interests of nurses as we embark on the critical work of healing our planet.

Summary

ANA continues to tackle the issues of a broken health system and work toward strategic solutions to navigate issues such as nurse staffing, moral distress and burnout, emergency preparedness, health equity, racism, and others. However, we must recognize that the health concerns related to climate change exacerbate every issue our nursing organizations actively work to resolve. These efforts will be futile if we fail to participate in policymaking and fail to engage in climate justice. “Climate justice in nursing addresses the social, racial, economic, environmental, and multispecies justice issues of the climate crisis through centering the experiences and ways of knowing in frontline and fenceline communities and safeguarding the rights of Nature to achieve planetary health” (LeClair et al., 2022, p. S257).

There is work to be done to address the climate crisis, and we will need nursing innovation in research, education, advocacy/policy, and practice. The executive summary of the 2019 Lancet Countdown report states, “Without accelerated intervention, this new era will come to define the health of people at every stage of their lives” (Watts et al., 2019, p. 1837). Given nursing’s long history of social justice, environmental awareness, systems thinking, transdisciplinary partnerships, and innovation, the future holds possibilities for improved human health of all people and sustainable lifestyles that support life on this planet.

Summary of Relevant ANA Policy, Publications, and Initiatives

[ANA House of Delegates Resolution \(historic policy, 2012\)](#)

Nurses’ Role in Recognizing, Educating, Advocating for Healthy Energy Choices

A call to nursing organizations to support, educate, advocate for, and collaborate in decreasing fossil fuel energy use, increasing energy conservation, and expanding utilization of healthier, sustainable forms of energy.

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ANA’s Principle of Environmental Health for Nursing Practice with Implementation Strategies (historic document, 2007): A practical guide and primer for nurses on sustainable and environmentally healthy nursing actions and practices.

Healthy Nurse, Healthy Nation: ANA Enterprise’s free nurse health, safety, and wellness program open to everyone but specifically created for nurses and nursing students. It is dedicated to improving the health of the nation, one nurse at a time, and contains environmental health challenges, blogs, and nurse spotlights.

Position Statement: Nurses’ Professional Responsibility to Promote Ethical Practice Environments (2021). Nurses have a commitment to create, sustain, and continuously improve the ethical workplace environment in all practice settings.

Precautionary Principle (historic, ANA Board adopted in 2003): “When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically” (Wingspread, 1998).

The Code is a guide on practicing nursing while providing quality care and meeting ethical obligations. Interpretive statement 9.4 in *The Code* emphasizes the importance of advocating for policies and practices that prioritize health and safety in the face of climate change. Nurses are called upon to protect the rights and dignity of individuals and communities impacted by climate change and to promote environmental and eco-justice and equity in policies and programs aimed at mitigating climate change. Additionally, *The Code* stresses the importance of interdisciplinary *collaboration* and stakeholder engagement in addressing issues that impact the health outcomes of climate change.

Nursing Scope and Standards of Practice describes the who, what, where, when, why, and how of nursing practice (ANA, n.d.). It highlights the importance of incorporating climate change and environmental health principles into nursing practice. Nurses are called upon to conduct assessments of environmental risks and exposures that impact health, particularly among vulnerable populations (*Scope and Standards, 2021*). They are also encouraged to engage in community-based approaches to promote environmental health and resilience, including advocating for policies and regulations that “focus on prevention of hazards to people and the natural environment” (*Scope and Standards, 2021, p. 107*).

Nursing’s Social Policy Statement provides a framework for nursing practice and advocacy related to social issues within 16 elements. It addresses climate change that would fall under #4: Hazardous Service, such as extreme weather events; #9: Promotion of the Health of the

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Public; #15: Workforce Sustainability; and #16: Protection in Hazardous Service (ANA, 2015). The policy emphasizes the importance of nursing’s role in addressing the social determinants of health, including the impact of climate change on health outcomes. Nurses are called upon to use their knowledge and expertise to identify and address the social, economic, and environmental factors that contribute to *health disparities* and climate-related health impacts.

Glossary

adaptation to climate change—adjusting to present or future climate; protecting people and communities from climate impacts that are happening now and will continue to happen for decades to come.

advocacy—the act or process of pleading for, supporting, or recommending a cause or course of action. Advocacy may be for persons (whether as an individual, a group, a population, or a society) or for an issue, such as potable water or global health (ANA, 2015).

climate change—long-term warming of the planet caused primarily by human activities, specifically emissions of greenhouse gases that trap heat in the atmosphere.

collaboration—working cooperatively with others, especially in joint intellectual efforts, in a way that includes collegial action and respectful dialogue (ANA, 2021).

comportment—behavior, bearing.

decarbonizing/decarbonization—the removal of carbon pollution (greenhouse gas emissions) from a business, community, home, etc. Greenhouse gas emissions are categorized into three scopes. Scope 1 is direct emissions from buildings or vehicles. Scope 2 is indirect emissions from purchased electricity and steam. Scope 3 is indirect emissions across a product’s or service’s life cycle (EPA, 2023a).

eco-justice—contraction of “ecological justice” that links environmental and social justice issues, thereby challenging both humanity’s destruction of the Earth and the abuse of economic and political power that results in poor people, particularly those affecting health and well-being (ANA, 2015).

environmental degradation—the deterioration in environmental quality from human activities and processes, such as improper land use, as well as from natural disasters (ANA, 2015).

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environmental justice—a form of justice whose concerns include degradation of agricultural land and food insufficiency; aridification, desertification, water takings, and nonpotable water; ozone layer degradation, deforestation, climate change, and air pollution; habitat loss and ecosystem destruction; industrial waste, sanitation, and nonbiodegradables; and choices of nonreplenishable over replenishable resources. It is also concerned with how various forms of environmental damage in the pursuit of economic self-interest place the heaviest burden on the poor and communities of color, forcing them to bear the highest social, environmental, economic, and health costs (ANA, 2015).

ethics—the branch of philosophy or theology in which one reflects on morality; the formal study of morality from a wide range of perspectives, including semantic, logical, analytic, epistemological, normative, and applied (ANA, 2015).

greenhouse gases—gases that trap heat in the atmosphere. The most common include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (EPA, 2023a).

metaparadigm—an overarching and general statement of a discipline that functions as a framework within which conceptual models develop (ANA, 2015).

mitigation of climate change—reducing the causes of climate change; reducing the release of greenhouse gas emissions into the atmosphere.

planetary health—a solutions-oriented transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth (Planetary Health Alliance, n.d.).

social justice—a form of justice that engages in social criticism and social change. Its focus is the analysis, critique, and change of social structures, policies, laws, customs, power, and privilege that disadvantage or harm vulnerable social groups through marginalization, exclusion, exploitation, and voicelessness. Among its ends are a more equitable distribution of social and economic benefits and burdens; greater personal, social, and political dignity; and a deeper moral vision for society. It may refer to a theory, process, or end (ANA, 2015).

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waste anesthetic agents—residual anesthetic gases, like sevoflurane, expired by patients in the breathing zones of nurses and other health care workers (AIHA & American Society of PeriAnesthesia Nurses, 2021).

wellness—the active pursuit of activities, choices, and lifestyles that lead to a state of health (Global Wellness Institute, n.d.).

Additional Relevant Resources

Alliance of Nurses for Healthy Environments

<https://envirn.org/>

AIHA and American Society of PeriAnesthesia Nurses' White Paper on Recognition, Evaluation, and Control of Waste Anesthetic Gases in the Post-Anesthesia Care Unit
<https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/White-Papers/Recognition-Evaluation-and-Control-of-Waste-Anesthetic-Gases-in-the-Post-Anesthesia-Care-Unit-White-Paper.pdf>

AACN Nursing Fact Sheet

[AACN Fact Sheet - Nursing \(aacnnursing.org\)](https://www.aacnnursing.org/fact-sheet/nursing)

CDC Impacts of Climate Change on Human Health

<https://www.cdc.gov/climateandhealth/effects/default.htm>

Fourth National Climate Assessment

<https://nca2018.globalchange.gov/chapter/14/>

Global Climate Change: Vital Signs of the Planet — Mitigation and Adaptation

<https://climate.nasa.gov/solutions/adaptation-mitigation/>

Health Care Climate Challenge and Nurses Climate Challenge

<https://nursesclimatechallenge.org/>

IPCC 2022 Report — Summary for Policymakers

https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

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Joint Commitment Statement on Climate Change and Health

<https://envirn.org/wp-content/uploads/2023/02/FINAL-Joint-Commitment-Statement-Climate-Change-and-Health.pdf>

National Academy of Medicine Action Collaborative on Decarbonizing the Health Sector

[Action Collaborative on Decarbonizing the U.S. Health Sector — National Academy of Medicine \(nam.edu\)](https://www.nam.edu)

The 2022 Global Report of the Lancet Countdown

<https://www.lancetcountdown.org/2022-report/>

References

American Association of Colleges of Nursing (AACN). (2021). The essentials: Core competencies for professional nursing education.

<https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf>

AACN. (2022). Nursing fact sheet. Retrieved 7/11/23 from <https://www.aacnnursing.org/news-data/fact-sheets/nursing-fact-sheet>

American Nurses Association (ANA). (n.d.). Scope of practice. Retrieved 4/20/23 from <https://www.nursingworld.org/practice-policy/scope-of-practice/>

ANA. (2015). *Code of Ethics for Nurses with Interpretive Statements*. Silver Spring, MD: Nursesbooks.org.

ANA. (2015). *Guide to Nursing's Social Policy Statement*. Silver Spring, MD: Nursingworld.org. 20–22.

ANA. (2021, May 14). *Nursing Scope and Standards of Practice, 4th Edition*. Silver Spring, MD: Nursesbooks.org.

Brenan, M. (2023). Nurses retain top ethics rating in U.S., but below 2020 high. News. gallup.com. <https://news.gallup.com/poll/467804/nurses-retain-top-ethics-rating-below-2020-high.aspx>

Centers for Disease Control and Prevention. (n.d.). *Climate effects on health*. <https://www.cdc.gov/climateandhealth/effects/default.htm>

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Eckelman, M. J., Huang, K., Lagasse, R., Senay, E., Dubrow, R., & Sherman, J. D. (2020). Health Care Pollution and Public Health Damage in the United States: An Update: Study examines health care pollution and public health damage in the United States. *Health Affairs*, 39(12), 2071–2079.

Environmental Protection Agency (EPA). (2022, December 13). *Climate change and the health of socially vulnerable people*. <https://epa.gov/climateimpacts/climate-change-and-health-socially-vulnerable-people>

EPA (2023b, March 3). *Climate change research*. <https://www.epa.gov/climate-research>

EPA (2023a, April 13). *Overview of greenhouse gases*. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

Gaines, K. (2022, January) *Nursing ranked as the most trusted profession for 21st year in a row*. <https://nurse.org/articles/nursing-ranked-most-honest-profession/>

Global Wellness Institute. (n.d.). What is wellness? Retrieved from <https://globalwellnessinstitute.org/what-is-wellness/>

International Council of Nurses. (Revised 2018). Position Statement: “Nurses, climate change and health.” Retrieved from <https://www.icn.ch/sites/default/files/inline-files/ICN%20PS%20Nurses%252c%20climate%20change%20and%20health%20FINAL%20.pdf>

International Council of Nurses. (2021). The ICN code of ethics for nurses. Retrieved from https://www.icn.ch/sites/default/files/2023-06/ICN_Code-of-Ethics_EN_Web.pdf

IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report*. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II, and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee & J. Romero (eds.)]. IPCC, Geneva, Switzerland (in press).

Kiely, D. & Wysocki, A. (2020). Federal funding of nursing research by the National Institutes of Health (NIH): 1993 to 2017. *Nursing Outlook*, 68(3), 270–283. Doi: 10.1016/j.outlook.2019.12.006. Epub 2020 Apr 5. PMID: 32268936.

Langan, J. & Krieger, M. (2019). Staffing needs and associated costs in times of disaster: An integrative review. *Nursing Economic\$,* 37(5), 221–230.

LeClair, J., Evans-Agnew, R., & Cook, C. (2022). Defining climate justice in nursing for public and planetary health. *American Journal of Public Health*, 112(S3), S256–S258.

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Leffers, J. & Butterfield, P. (2018). Nurses play essential roles in reducing health problems due to climate change, American Academy of Nursing on Policy, *Nurse Outlook*, 66(2), 210–213. Doi: 10.1016/j.outlook.2018.02.008

Melillo, J. M., Richmond, T. C., & Yohe, G. W., Eds., 2014: *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program, 841 pp. Doi: 10.7930/J0Z31WJ2

Nicholas, P. K. & Breakey, S. (2017). Climate Change, Climate Justice, and Environmental Health: Implications for the Nursing Profession. *Journal of Nursing Scholarship*, 49(6), 606–616. <https://doi.org/10.1111/jnu.12326>

Planetary Health Alliance. (n.d.). Planetary Health. Retrieved from <https://www.planetaryhealthalliance.org/planetary-health>

Romanello, M., Di Napoli, C., Drummond, P., Green, C., Kennard, H., Lampard, P., ... & Costello, A. (2022). The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels. *The Lancet*, 400(10363), 1619–1654.

Schenk, E. (2016). “The REAP Framework: Research, education, advocacy and practice (Panel)” 2016 *Alliance of Nurses for Healthy Environments (ANHE) Environmental Health Nursing Conference*. Available at <http://works.bepress.com/elizabeth-schenk/46/>

Sommer, L. (2021, September 7). Climate change is the greatest threat to public health, top medical journals warn. NPR. <https://www.npr.org/2021/09/07/1034670549/climate-change-is-the-greatest-threat-to-public-health-top-medical-journals-warn>

Tingen, M. S., Burnett, A. H., Murchison, R. B., & Zhu, H. (2009). The importance of nursing research. *Journal of Nursing Education*, 48(3), 167–170.

United Nations. (2015). *Paris Agreement*. Retrieved 4/19/23 from https://unfccc.int/sites/default/files/english_paris_agreement.pdf

Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesoviva, K., Boykoff, M., et al. (2019). The 2019 report of the Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *The Lancet*, 394(10211), 1836–1878. [https://doi.org/10.1016/S0140-6736\(19\)32596-6](https://doi.org/10.1016/S0140-6736(19)32596-6)

Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Beagley, J., Belesova, K., Boykoff, M., Byass, P., Cai, W., Campbell-Lendrum, D., Capstick, S., Chambers, J., Coleman, S., Dalin, C., Daly, M., Dasandi, N., Dasgupta, S., Davies, M., Di Napoli, C., Dominguez-Salas, P., ... & Costello, A. (2021).

POSITION STATEMENT



The 2020 report of the Lancet Countdown on health and climate change: responding to converging crises. *The Lancet*, 397(10269), 129–170. [https://doi.org/10.1016/S0140-6736\(20\)32290-X](https://doi.org/10.1016/S0140-6736(20)32290-X)

Wingspread Conference. (1998). *Wingspread statement on the precautionary principle*. Retrieved 3/27/23 from <http://www.gdrc.org/u-gov/precaution-3.html>

World Health Organization (WHO). (2020). *State of the world's nursing 2020: investing in education, jobs, and leadership*.

<https://apps.who.int/iris/bitstream/handle/10665/331673/9789240003293-eng.pdf>

WHO. (2021). *Climate change and health*. Retrieved 4/19/23 from <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

World Meteorological Organization. (2023, May 17). *Global temperatures set to reach new records in next five years* [Press Release]. <https://public.wmo.int/en/media/press-release/global-temperatures-set-reach-new-records-next-five-years#:~:text=There%20is%20a%2066%25%20likelihood%20that%20the%20annual,a%20whole%2C%20will%20be%20the%20warmest%20on%20record>