

SPOTLIGHT ON NURSING

Planetary Health and Nursing: A Call to Action

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The Spotlight on Nursing is a recurring column from the University of Hawai'i at Mānoa Nancy Atmospera-Walch School of Nursing (NAWSON). It is edited by Holly B. Fontenot PhD, APRN, WHNP-BC, FAAN, FNAP; Research Director for Department of Nursing, Frances A. Matsuda Chair in Women's Health, and Professor for NAWSON, and HJH&SW Contributing Editor; and Joanne R. Loos PhD, Science Writer for NAWSON.

Acronyms

UHM = University of Hawai'i at Mānoa

Human activity is severely impacting the Earth's natural systems. Overuse of the planet's natural resources has resulted in irreversible environmental degradation through biodiversity loss, climate change, air pollution, and loss of natural habitats.¹ Collectively, these human-caused impacts on the environment contribute to poorer human health.¹ In Hawai'i, these trends threaten to permanently alter our way of life. Coastal erosion and beach loss due to extreme weather and rising ocean levels are threatening critical infrastructure, housing and culturally historic areas.² These conditions interact with economic and social conditions, such as poverty and access to health services, compounding existing challenges faced by traditionally underserved populations or disadvantaged groups.³ The scale of the environmental impact of human activity around the world has progressed to a point that we may no longer be able to safeguard human health and well-being.^{1,4}

In order to seek solutions to the crisis, a novel framework to guide new science, called planetary health, has emerged. Planetary health has been defined as the health of human civilization and the state of the natural systems on which it depends.¹ It is an interdisciplinary and transdisciplinary approach that aims to investigate the effects of environmental change on human health, including the study of the political, economic, and social systems that govern those effects. It differs from global health in that it has a strong emphasis on ecology and is concerned with more than just the human species.⁵ It emphasizes that humans are a part of nature, not separate from it, thus any effort to improve human conditions must not come at the expense of the environment.⁶ The emergence of planetary health comes at a time when the impact of climate change on human health has become increasingly clear. Changes in climatic conditions have resulted in direct effects on human health such as injury or death due to extreme heat, wildfires, droughts, storm surges,

and floods. Indirect health effects also occur through exposure to poorer air and water quality, food scarcity, increased risk of infectious diseases, and population displacement.⁷

Planetary Health is Aligned with Traditional Hawaiian Perspectives

One of the promising aspects of planetary health is its recognition of the need to integrate indigenous and traditional knowledge with contemporary practices to develop new strategies to live in greater harmony with natural systems.⁸ This is an area where the people of Hawai'i can offer unique perspectives to guide local and global planetary health efforts. A Native Hawaiian perspective that can inform planetary health efforts is the *ahupua'a* or *moku* system. This traditional Hawaiian method of land division, developed in the islands before European contact, segmented land into self-sustaining geographical units to manage human activities in harmony with the area's natural resources.⁹ Similarly, *malama 'āina* is a central cultural Hawaiian value that represents how caring for the land is caring for its people.¹⁰ It links human life and natural systems into a mutually dependent relationship. This value is manifested in practices such as regenerating, restoring, enriching, and rebuilding natural systems by protecting the ocean and sea life, and cultivating native plants. It is the Native Hawaiian cultural manifestation of a central tenet of planetary health, the interdependence between human health and nature. With guidance from Native Hawaiian cultural practitioners, indigenous perspectives and practices can help to inspire future planetary health strategies that foster the rejuvenation of natural systems, respect, and responsibility for stewardship of the environment and sustainable practices.

Planetary Health is Aligned with Nursing's Theoretical Perspectives

Nurses are uniquely positioned to lead the advancement of planetary health science, as they are trained in the understanding that human health and dignity are intertwined with the vitality

of the natural world. Care for the environment is deeply rooted in nursing practice. The American Nurses Association Code of Ethics compels nurses to advocate for policies and programs within healthcare that sustain and repair the natural world.¹¹ The American Association of Colleges of Nursing also lists understanding the impact of climate change on environmental and population health as a core competency of nursing education.¹² The nursing profession recognizes that social justice and environmental justice are inextricably linked as environmental degradation disproportionately impacts women, children, Indigenous or minority groups, and people in poverty.

Planetary Health: A Call to Action for Nurses in Hawai'i

Advance Planetary Health Research

Nursing scientists must partner with community members, policy makers, other health professionals, and related scientists to continue to explore the impact climate change has on the health of communities. Evidence-based interventions are needed to promote behavior change related to sustainability (in the community and within the health system), promote emergency preparedness (for natural disasters, disease outbreaks, and medical emergencies),¹³ and address health disparities associated with the impacts of climate change. For example, health is impacted by pollution, access to food and water, disease carrying vectors, and natural disasters, and those who are less resourced or have additional vulnerabilities are most at risk. However, the best practices to support at-risk individuals and communities have yet to be fully explicated.

Advocate for Planetary Health Policy and Action

Advocacy for policy change that prioritizes climate solutions is another major area where nurses can make a big difference. Climate for Health,¹⁴ a policy and action initiative led by national health leaders, provides tools and resources for health leaders to take action and advocate for climate solutions. This organization offers a guide for health care leaders to reduce the impact that health care facilities have on the environment, including reducing the amount of energy health centers consume, reducing or off-setting carbon emissions from transportation emitted from employees and patients, and implementing tips for eco-friendly transportation options.¹⁵ Nurses can also raise awareness and join other health professionals and advocacy organizations in participating in the US Call to Action On Climate, Health, and Equity: A Policy Action Agenda. This policy agenda urges government, business, and leaders in society to recognize climate change as a health emergency and prioritize action on climate health and equity.¹⁶

Lead Change for the Community and Clinical Practice

Nurses must rally people in their communities as well as their colleagues in the health professions to (1) decrease our collective environmental footprint,² (2) prepare for public health emergencies,¹³ and (3) promote sustainability in health care delivery.¹⁷ In Hawai'i, this could mean decreasing our energy consumption, choosing locally-sourced foods (85% of Hawai'i's food is imported²), reducing consumption, reusing and recycling materials utilized in nursing care, and practicing *malama 'āina*.

Preparing for public health emergencies is an essential element of planetary health and a national priority. One of the national goals for Healthy People 2030 is to improve emergency preparedness and response by building community resilience.¹³ During emergencies, critical infrastructure like health care facilities can be damaged or destroyed, or the need for services can overwhelm capacity. Nurses must ensure that they and the communities they serve are prepared for emergencies by encouraging all households to develop family emergency plans and maintain basic supplies and medical necessities. Assisting patients during routine community-based care to create emergency action plans as part of standard health planning will help bolster overall community resilience and contribute to the protection of vulnerable groups in Hawai'i. This is especially important for populations with limited access to resources as well as households with vulnerable persons, such as *keiki* (children) and *kūpuna* (older adults). For example, Native Hawaiians, Pacific Islanders, and Filipinos in Hawai'i experienced poorer health and economic outcomes as a result of the COVID-19 pandemic.^{18–20}

Nurses must join their colleagues in our state's hospitals, clinics, and community health centers to be better prepared for public health emergencies, as well as identify and share concerns with public health leaders regarding harmful environmental exposures.²¹ Nurses might lead these efforts by providing ongoing interdisciplinary education and developing relevant emergency response competencies, such as disaster triage, proper use of personal protective equipment, emergency communication protocols and equipment, and knowledge of how to work within large-scale emergency response systems.

Nurses represent the largest segment of the health care workforce, and it is imperative for Hawai'i nurses to use their voice to enact organizational change that promotes sustainability and considers the core tenants of planetary health. Many Hawai'i nurses have joined more than 50 000 others nationwide to take part in the Nurses Climate Challenge, yet more nurses are needed. Launched by the Alliance for Nurses for Healthy Environments, this organization provides ready-to-use materials

that nurses may use to educate their colleagues and foster the larger health care community's commitment to climate solutions.¹⁶ Health care facilities are some of the biggest producers of waste and emissions,²² and an estimated 85% of hospital waste is non-hazardous and potentially could be reused and/or recycled. Across the nation, nurses have formed hospital "green teams" to address this problem, and these nurses can inspire similar solutions in Hawai'i.²³

Planetary Health and Nursing Education

Planetary health approaches are being integrated into the nursing curriculum at the University of Hawai'i at Mānoa (UHM). Faculty have developed innovative learning experiences that emphasize the link between human health and the natural environment, bolstering emergency preparedness and response skills, and integrating indigenous knowledge and values of conservation. For example, as part of new nursing student orientation, undergraduate students spend time cultivating *kalo* (taro) on campus. This is significant to Hawaiian culture, as *kalo* is a staple of the traditional Native Hawaiian diet. These activities centered on *malama 'aina* are embedded into their curriculum, allowing nursing students to reflect on how their connection to nature can shape personal and community health. The connection to Indigenous ways of thinking about land and resources is also emphasized in community/public health nursing courses. Students complete community assessments about their *ahupua'a*, which helps students identify community needs, strengths, resources, and vulnerabilities based on knowledge of local history and values. These experiences encourage students to gain a newfound perspective and engender respect for indigenous knowledge and its place in informing their nursing practice and perspectives. Ideally, this will inspire students to contribute to future local planetary health strategies.

UHM nursing students also receive robust training and education on emergency preparedness and response to natural disasters and disease outbreaks. Students participate in interprofessional simulations that include scenarios involving disaster triage and public health response measures to control communicable diseases during emergencies. These experiences prepare nursing students to learn to work collaboratively with interprofessional teams to address public health during crises.²⁴ Students in the Masters of Science Advanced Population Health Nursing program have a dedicated course on disaster nursing to prepare them to serve as leaders in disaster health management. UHM nursing students also receive training on how to engage in advocacy at the community and state level. For example, students develop infographics to raise awareness regarding the health impacts of climate change in Hawai'i communities. Faculty also help students learn to access the Hawai'i state legislature website. Students learn how to retrieve information such as legislators' contact information and locate the drafts of bills pertaining to health and social issues. Navigating the legislative process prepares UHM nursing students with knowledge of the tools necessary to engage planetary health issues at the systems level.

The impacts of climate change are evident and are already affecting human health. Nurses in Hawai'i have multiple ways to lead planetary health science and help to grow the planetary health movement in a way that reflects unique Hawaiian values. It is time for Hawai'i nurses to bring together teams that will work to address the crisis and take the lead to improve planetary health locally and globally.

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