Issues in Planetary Health – How Can Applied Health Services Research Contribute?

Assignment 3

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AHS 6000: Introduction to Health Services Research

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Interconnection of Human and Planetary Well-Being

The pressing challenges faced by humanity and the environment have led to new fields of study and conceptual frameworks. These clarify the deep interconnection between human well-being and the natural world, especially in the context of the Anthropocene epoch (Levett-Jones et al., 2025). According to the Lancet Commission on Planetary Health, planetary health is “the health of human civilization and the state of the natural systems upon which it depends” (Whitmee et al., 2015, p. 1978). Planetary Health highlights this interdependence between human health and the natural environment (Levett-Jones et al., 2025). It emphasizes that human health and well-being are inseparable from the health and well-being of all ecosystems (Faerron Guzmán et al., 2025).

Expanding public health to include stewardship of the planet’s natural systems requires rethinking the types of cities we construct and how we produce energy (Myers, 2017). It also involves reconsidering how we feed ourselves, and how well we protect our marine and terrestrial biodiversity. In this context, public health becomes intertwined with almost every other facet of human activity and demands a new paradigm (Myers, 2017). Planetary Health also aligns closely with the eco-centric worldview of Indigenous Peoples (Howard & Marks, 2024). For thousands of years, indigenous cultures have centered the interconnectedness of humans, nature, the environment, and the planet as a core tenet. This forms an underlying value system and way of living in kincentric relationships (Redvers et al., 2020).

Planetary health highlights that human activities have exceeded Earth's available resources, causing unprecedented biophysical changes (Myers, 2017). These biophysical changes can be categorized into six key areas (Myers, 2017):

- Disturbances in the global climate system;
- Pervasive pollution degrading air, water, and soil quality;
- Accelerated loss of biodiversity, threatening ecosystems and the services they provide;
- Disruptions in biogeochemical cycles, particularly carbon, nitrogen, and phosphorus;
- Extensive shifts in land use and land cover; and
- Depletion of vital resources such as fresh water and arable land.

Each of these dimensions interacts in complex ways, influencing the air we breathe, the water we use, and the food we produce. Rapid environmental changes also increase our vulnerability to infectious diseases and natural hazards like heat waves, droughts, floods, fires, and storms. Ultimately, these shifts affect all aspects of health and well-being, including nutrition, disease, displacement, conflict, and mental health (Myers, 2017).

Recognizing that human health is deeply tied to the health of all ecosystems demands transformative action from governments and health authorities (Levett-Jones et al., 2025). The Anthropocene, the current geological epoch, is defined by human activity as the dominant driver of global environmental change, shaping critical issues in health and sustainability (Wabnitz et al., 2020; Whitmee et al., 2015). The Anthropocene can be understood as covering the last 500 years. This period is marked by the structural interconnections of colonialism, capitalism, militarism, and race-based violence (Chungyalpa et al., 2025).

Human disruption has pushed the Earth system beyond safe limits, with six of the nine planetary boundaries already crossed: climate change, biodiversity loss, land-system change, freshwater use, novel entities, and biogeochemical flows (Chungyalpa et al., 2025; Howard & Marks, 2024). The planetary boundaries framework sets the ecological limits for humanity’s safe space. This framework supports the well-being of people and all life on Earth. The boundaries most critical to our planet's stability are climate change and biosphere integrity. Both are instrumental in driving the Earth towards a dangerous new state (Steffen et al., 2015). As our activities continue to affect these limits, breaching them will have even more dire consequences.

Future Activities of Governments and Health Authorities

Health Services Research (HSR) plays a vital role in advancing planetary health, tackling climate change, and improving human health service delivery (Raymakers et al., 2023). As a transdisciplinary discipline, HSR examines how key actors in policy and implementation interact to foster better health outcomes (Raymakers et al., 2023). To fulfill this transformative potential, HSR must be grounded in justice and equity, recognizing that social and climate justice are interconnected (Cooper Reed et al., 2021).

Aligning health services and policy research with the links between climate change, human health, and planetary health is challenging. Addressing this demands new approaches in methodology, ethics, training, and policy (Levett-Jones et al., 2025). Researchers can help drive meaningful systemic change (Pongsiri et al., 2017; Wabnitz et al., 2020). Specifically, Howard & Marks (2024) proposed the establishment of several key structures, including:

- A National Resource Center for Planetary Health and Sustainable Healthcare.
- A National Planetary Health and Sustainable Healthcare Research Community.
- An Institute on Environments and Health to be added to research-granting agencies like the Canadian Institutes of Health Research (CIHR).

Championing intersectoral policy and legislation is also vital (Castleden et al., 2023). Experts emphasize the need for public health systems to lead with a focus on decolonization, justice, and equity; build political will for climate action; promote collaboration and community engagement; and shift societal values toward health-centered economies (Castleden et al., 2023).

Health authorities must recognize the healthcare sector's significant contribution to climate change (Raymakers et al., 2023). To maintain public trust, health care professionals should expand the principle of "first do no harm" to include planetary health as central to human well-being (Raymakers et al., 2023). Furthermore, health care professionals are uniquely positioned to serve as mediators between science, policy, and practice. They can drive individual and systemic transformation, increase resilience to environmental change, and reduce society's ecological footprint (Wabnitz et al., 2020). To effectively enact these responsibilities, health authorities must actively work toward a nature-positive, carbon-neutral healthcare system (Levett-Jones et al., 2025). This involves reorienting every part of health systems toward planetary health, with focus areas including procurement, energy, efficiency, and waste reduction. In addition, health authorities should advocate for policies that prioritize sustainable, ethically sourced medical supplies across the supply chain (Howard & Marks, 2024).

The interdependence of human and planetary health demonstrates that the impacts of environmental degradation are profoundly inequitable, highlighting the necessity for justice-centered approaches (Levett-Jones et al., 2025). Building on these priorities, future initiatives should advance the decolonization of public health by recognizing and valuing Indigenous knowledge systems relevant to planetary health and well-being (Castleden et al., 2023; Duff et al., 2020). As a further step, and leveraging their role as trusted communicators, health authorities should establish partnerships beyond clinical disciplines to promote transdisciplinary collaboration and advocacy (Myers, 2017).

Partnerships and Systems Strategies for Planetary Health

Beyond institutional leadership, advancing planetary health also requires meaningful collaboration with communities as co-creators of knowledge and action (Chungyalpa et al., 2025). Building a sustainable and equitable planetary health future depends on citizens, researchers, and Indigenous knowledge holders working together through shared, participatory learning systems (Pongsiri et al., 2017). Citizen science, which involves the active participation of civil society in data collection and policy shaping, plays a vital role in crisis mitigation (Rosas et al., 2022. Solutions for planetary health must be inclusive, participatory, and transdisciplinary, with a strong emphasis on integrating local and Indigenous knowledge to create equitable, community-led approaches (Ebi et al., 2020). Adopting a systems approach involves co-designing research with communities and interest holders, to ensure that knowledge is co-produced and grounded in local contexts (Pongsiri et al., 2017).

Systems thinking is essential. Governments and health authorities need to integrate data from social, biological, and ecological systems to predict non-linear changes, avoid unintended consequences, and strategically address upstream drivers of health impacts (Pongsiri et al., 2017). To achieve long-term sustainability, implementing a systems approach in policy development and planning is essential for anticipating consequences, managing trade-offs, and identifying synergies (Pongsiri et al., 2017).

Climate change, planetary health, and human health are deeply interconnected, and addressing them is essential to achieving the UN Sustainable Development Goals (Morton et al., 2019). A systems approach, especially through SDG 17: Partnerships for the Goals, unites economic, environmental, and social health. Governments and institutions need to work together to address these connected crises. Policies supporting renewable energy, reduced fossil fuel use, and energy efficiency can cut carbon emissions and improve planetary health, keeping healthcare aligned with the SDGs (Levett-Jones et al., 2025).

The planetary health crisis requires us to address not only physical challenges but also emotional, spiritual, and psychological dimensions. Environmental degradation and climate disruptions impact mental health, intensifying eco-anxiety, grief, anger, and guilt (Levett-Jones et al., 2025; Howard & Marks, 2024). Rapidly changing environmental conditions heighten risks of PTSD, depression, and anxiety, particularly among marginalized and Indigenous populations (Faerron Guzmán et al., 2025; Mishra et al., 2025). Acknowledging these mental health impacts is essential for resilience-building, catalyzing constructive action and systemic change (Mishra et al., 2025). Governments should embed climate trauma and mental-health-informed perspectives in policy, addressing structural forces such as capitalism, colonialism, and racism that perpetuate inequities (Castleden et al., 2023). Embracing Indigenous knowledge, which connects healthy lands with healthy peoples, is vital for fostering collective healing and resilience (Castleden et al., 2023).

Achieving lasting sustainability and safeguarding future generations requires a fundamental shift in societal values and economic priorities, from short-term interests toward long-term stability and genuine sustainability (Levett-Jones et al., 2025). This transformation calls for decision-making frameworks that prioritize enduring, sustainable prosperity over immediate gains. Neuroscience shows that when we consciously consider future generations, we make choices that better support their well-being (Mishra et al., 2025).

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