Cross-cutting principles for planetary health education

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Since the 2015 launch of the Rockefeller Foundation Lancet Commission on planetary health,1 an enormous groundswell of interest in planetary health education has emerged across many disciplines, institutions, and geographical regions. Advancing these global efforts in planetary health education will equip the next generation of scholars to address crucial questions in this emerging field and support the development of a community of practice. To provide a foundation for the growing interest and efforts in this field, the Planetary Health Alliance has facilitated the first attempt to create a set of principles for planetary health education that intersect education at all levels, across all scales, and in all regions of the world—ie, a set of cross-cutting principles.

These 12 cross-cutting principles (panel) are envisioned to be a set of core messages that every educator teaching planetary health at any level should strive to impart upon their students. These principles of planetary health education will act as overarching and wide ranging guiding themes for any educational setting, rather than as specific and measurable objectives that are audience dependent. These principles are intended to act as a base for curricular development and as a tool to guide education efforts in this emerging field; however, they should not be considered to be all-encompassing principles or equally important across all educational settings. Incorporating these principles into planetary health education efforts around the world should allow for a shared basis of

### Panel: 12 cross-cutting principles

#### 1 A planetary health lens
Many global challenges come into sharper focus when they are viewed with the idea of planetary health in mind. Equipping students with what we have called a planetary health lens will enable them to have an understanding and appreciation of the crucial linkages, cause–effect relationships, and feedback loops between environmental change and human health. Through this lens, students will be able to recognise and explore how human stewardship of the Earth is a primary determinant of future population health.

#### 2 Urgency and scale
The field of planetary health is driven by the scale of environmental change, its effects on human health, and the urgency with which the global population must respond. Students should be able to examine the complexity of interactions between the geographical scale, temporal scale, socioeconomic factors, and political and cultural context that shape specific challenges to and potential solutions for sustainable human health outcomes.

#### 3 Policy
Planetary health is intrinsically policy oriented. By quantifying the effect on human health effects of anthropogenic environmental changes and communicating them to stakeholders at many levels, collaborative work can be done across sectors to identify policies and practices, both local and global, to protect and improve the health of global populations. A familiarity with the evidence gaps and policy applications of planetary health research, and an appreciation for agencies at the individual and community level are key for a meaningful and context-specific translation of research into policy and action.

#### 4 Organising and movement building
Students should develop an understanding of the role that organising in the community and movement building has in the political process both locally and globally. They should have an appreciation for the influence of a so-called bottom-up approach to policy change, and that the capacity to mobilise and manage resources and people power is key when considering solutions to challenges in planetary health.2

#### 5 Communication
Challenges in planetary health are complex, spanning different disciplines, sectors, geographical regions, cultures, and scales; therefore, effective and meaningful communication across these arenas is needed, with a focus on translating planetary health science. Students should develop an understanding of the variety of communication methods available and how to select the best suite of tools as they work to convey the challenges and solutions of planetary health to diverse audiences. An appreciation for the importance of listening as a part of effective communication is vital.

#### 6 Systems thinking and transdisciplinary collaborations
An understanding of planetary health necessitates engaging with many disciplines and stakeholders to understand and propose solutions to complex challenges. Thus, the incorporation of systems thinking and knowledge integration into curricula is essential to better equip students to collaborate across disciplines and develop sustainable solutions for the challenges of planetary health that overcome existing gaps in research design and associated policy development.

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Understanding across disciplines, geographical regions, and cultures teaching planetary health. The cross-cutting principles were established through a series of five interactive sessions with the 137 members of the Planetary Health Education Brainstorm Group who are from all over the world and involved in education efforts at the intersection of health and environmental change (appendix).

The continued growth and development of planetary health education will build upon these cross-cutting principles, identify core principles that might be missing, and will require future efforts to identify global standards that ensure quality and consistency in educational content for students learning about planetary health at all levels of education. We invite educators around the world to engage with this content, share their input and teaching resources, and connect with the broader planetary health community as they work to bring planetary health into their classrooms.

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