

# Health, Equity and Climate Change: Rethinking What Health Professionals Must Know

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# Traditional biomedical models

Table 1

Characteristic	Curricular Model				
	Apprenticeship-based (1765–)	Discipline-based (1871–)	System-based (1951–)	Problem-based (1971–)	Clinical-presentation-based (1991–)
Organization of course content (skills, knowledge, attitudes)	Around subject	Around discipline	Around organ systems	Around clinical cases	Around 120 clinical presentations
Controllers of content	Faculty	Departments	Topic committee	Curriculum committee	Curriculum committee
Relationship of clinical to basic sciences	Separated; emphasis on clinical work	Separated; emphasis on basic sciences	Interdigitated 50–50 within context of organ systems	Integrated within context of clinical cases (emphasis on clinical)	Integrated 50–50 within context of problem-specific schemata
Organization of concept formation	Around individual courses	Around individual disciplines	Around organ systems; definitions of normal, abnormal; patient; signs and symptoms	Around clinical problems as defined by learner, small groups, and tutors	Around presentation-specific, expert-derived schemata
Teaching method(s)	Lecture	Lecture	Primarily lecture, some small groups	Emphasis on small groups	50–50 lectures and small groups
Timing of patient/case exposure	Delayed	Delayed until clerkships	Early but limited	Early, single exemplary cases	Early, multiple exemplary cases
Cognitive skill(s) emphasized	Rote memorization	Critical thinking	Problem solving	Problem solving	Categorization
Primary learning guides	Lecture notes and textbooks	Lecture notes and textbooks	Learning objectives and textbooks	Learning objectives and clinical problems	Teaching and learning objectives, expert schemata
Problem-solving model	None	Hypothetical–deductive	Hypothetical–deductive	Hypothetical–deductive	Problem-specific schemata

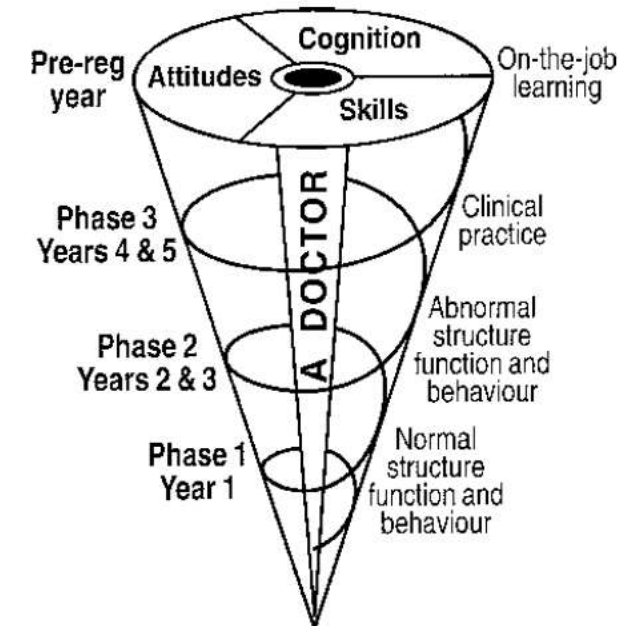


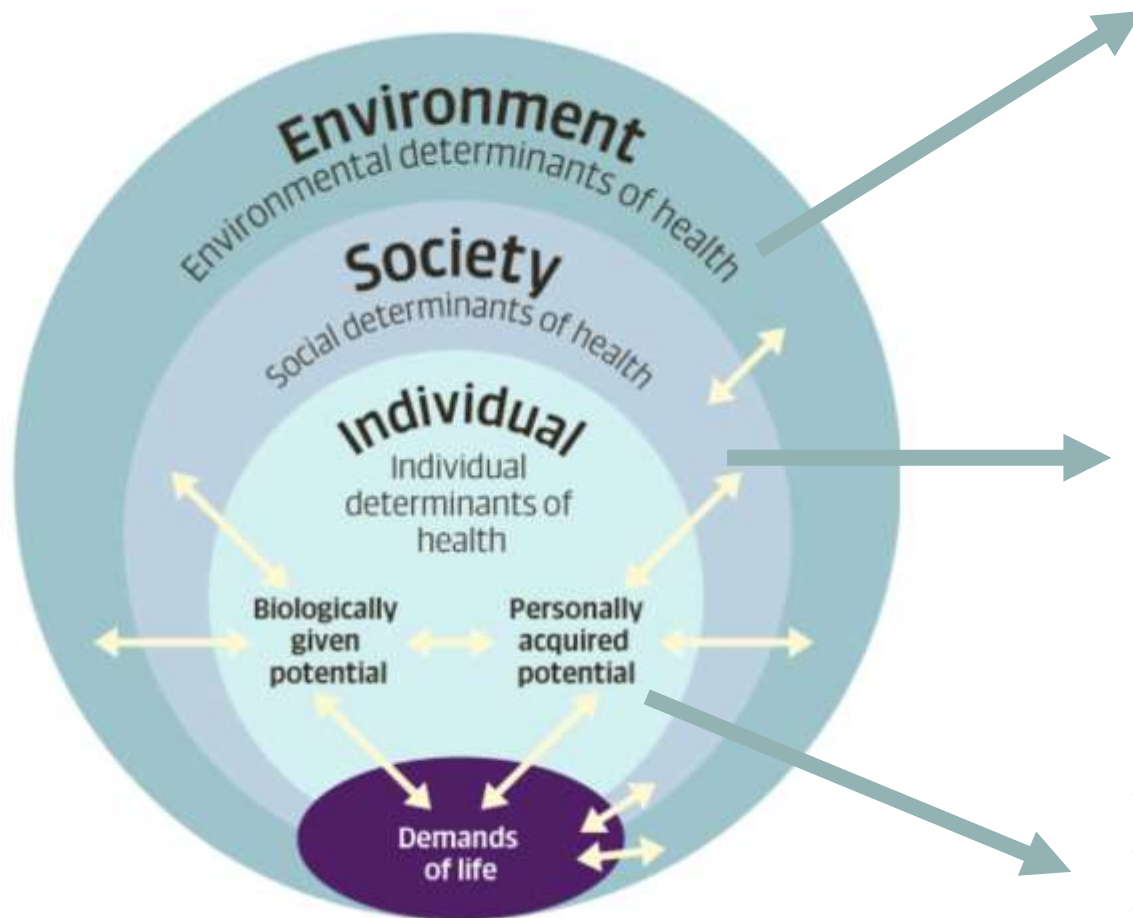
Figure 1. The spiral curriculum model.  
Source: Harden & Stamper (1999).

# Why the traditional biomedical teaching model is failing our students

- **Focus on disease to the relative exclusion of behaviour, social or environmental causes**
  - 80% of medical education focused on biology
  - 60% of premature deaths are related to social and environmental factors
- **'Illness focused'**
  - Focused on pathology/interventions, not importance of public health as the cornerstone of healthcare
  - Lack of focus on living well as opposed to 'not dying'



# Comprehensive climate and health education



- Intersection between environment and health
- Impact of urban planning on health outcomes and intersection with climate change (i.e. red-lining)
- Co-benefits of solutions that address both underlying inequities and climate change (i.e. transport)

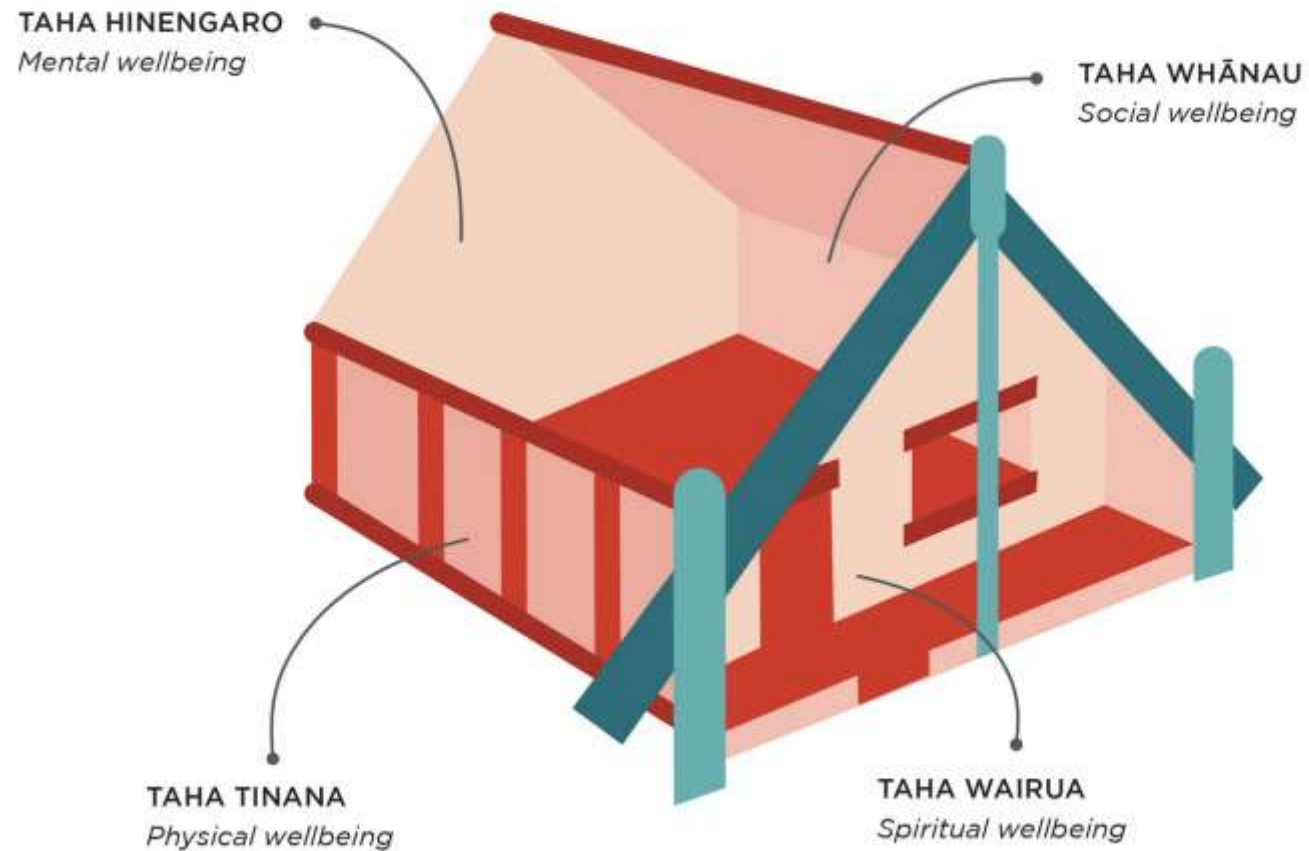
- Social determinants of health and existing inequities
- How climate change exacerbates these inequities
- Co-benefits of solutions that address both underlying inequities and build adaptation to climate change (i.e. social capacity building)

- Genetics
- Individual behaviours\*
- This is also the level most addressed by traditional biomedical education models

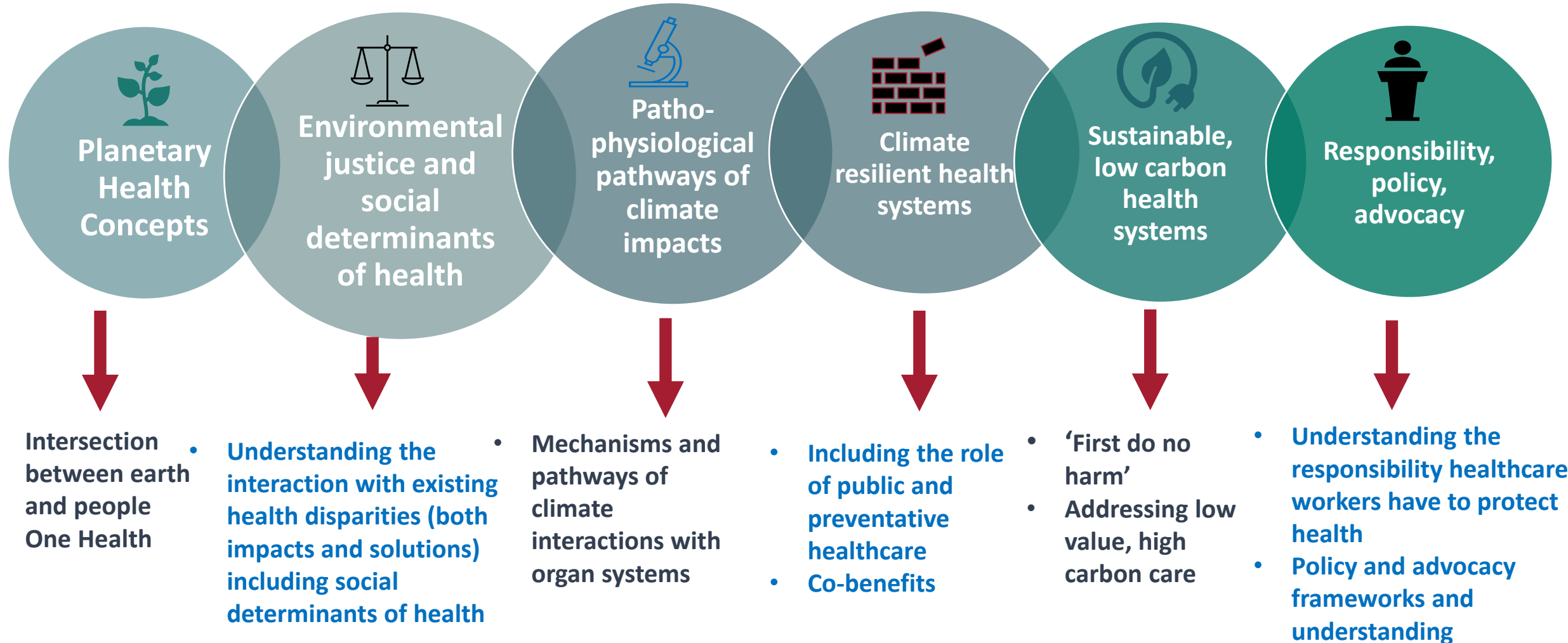


# The Whare Tapa Whā model of wellbeing

Dr Mason Durie's Te Whare Tapa Whā model compares hauora to the four walls of a whare, each wall representing a different dimension. All four dimensions are necessary for strength and symmetry.



# Framework for integrating climate change concepts into health curriculum



# There is a rapidly narrowing window of opportunity to enable climate resilient development

(a) Societal choices about adaptation, mitigation and sustainable development made in arenas of engagement

Dimensions that enable actions towards higher climate resilient development

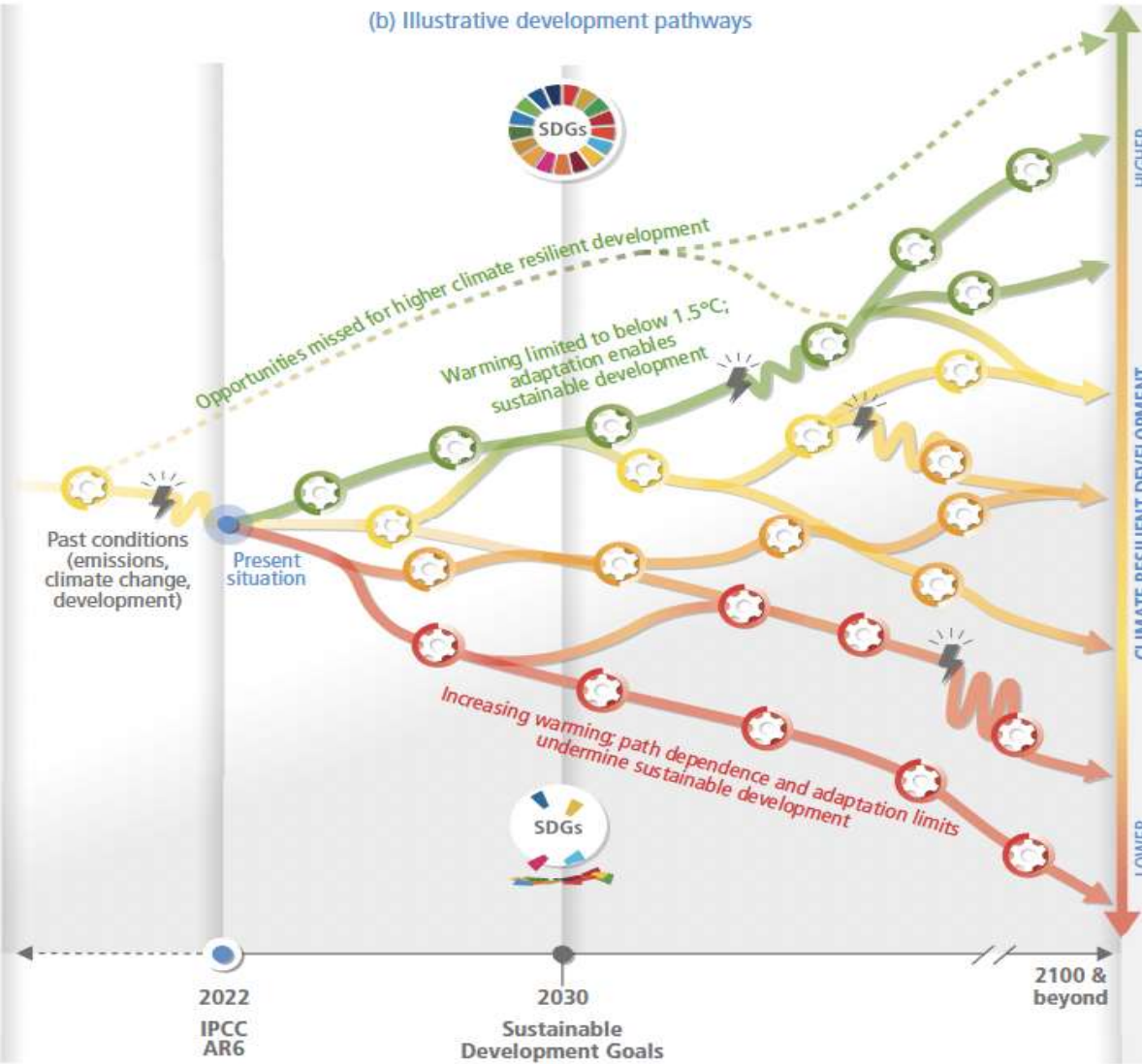


**Arenas of engagement:**  
 Community  
 Socio-cultural  
 Political  
 Ecological  
 Knowledge + technology  
 Economic + financial



Dimensions that result in actions towards lower climate resilient development

(b) Illustrative development pathways



(c) Actions and outcomes characterizing development pathways



Illustrative climatic or non-climatic shock, e.g. COVID-19, drought or floods, that disrupts the development pathway

Narrowing window of opportunity for higher CRD

“ Climate change is the biggest global health threat of the 21st Century. Climate change will have its greatest impact on those who are already the poorest in the world: it will deepen inequities and the effects of global warming will shape the future of health among all peoples.

THE LANCET

May 2009





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