Development of a Health Professions Curriculum on Environmental Sustainability and Health
Part 1: Medicine
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Background

- Burden of disease
- Role of health care professionals
- Educate for recognition and responsibility
Defining ESH Education

- Education on environmental sustainability and health (ESH) is:
  - Education about impact of climate and environment on health
  - Education about the impact of the health care industry on the climate and environment
Current State of ESH Education

- **Nursing**
  - Royal College of Nursing (Barna et al, Nurse Education Today)
  - NurSus Toolkit (Richardson, Plymouth)

- **Medicine**
  - UK Sustainable Health Care Education Network (Thompson et al, Lancet)

- **UCSF Academic Senate Committee on Sustainability**

- **Pharmacy and dentistry**
Aim

To develop ESH curricula for the health professions

- Focus on work to date in Medicine
Curriculum Development Model

Kern 2009
Methods

1. Sustainable Health Care and UCSF Academic Senate Committee on Sustainability objectives (Needs)

2. Modified Delphi (Objectives)
   - Rate importance of objectives and timing
   - ESH experts (academic and community) globally
3. Interviews (Educational Strategies)

- How to teach, where to introduce, ESH experts (academic and community) locally and nationally, and students
Results: Delphi

15 items achieved CVI of .78 or greater

Describe how the environment and human health interact at different levels (Doctor as scholar and scientist)

Outline the dependence of human health on global and local ecological systems, which supply essentials such as air, water and a stable climate.

Discuss the contribution of human activity and population size to global environmental changes such as climate change, biodiversity loss and resource depletion.

Describe the mechanisms by which human health is affected by environmental change, for example through changes in disease vectors, exposure to extreme weather, migration and reduced food security.

Explain the concept of environmental justice and the core principles for addressing it.

Describe features of a health-promoting local environment, in community and healthcare settings, to include access to green spaces, clean air and an active travel infrastructure.

Discuss medical, ethical, legal, and economic factors in caring for patients with environmental disease.
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<th>Results: Delphi</th>
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<td>Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems</td>
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<td>Doctor as practitioner</td>
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Results: Delphi

Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment. (*Doctor as professional*)

Explain how the health impacts of environmental change are distributed unequally within and between populations and the disparity between those most responsible and those most affected by change.

Discuss ethical tensions between allocating resources to individual patients and protecting the environment upon which the health of the wider community depends.

Evaluate their work environment for level of sustainability.
Timing in Medical Education

- No exclusive time
- Better Certain Times
- Preclinical Years
- Definition of ES
Interviews: Educational Strategies

Linkages

Local Context & Partnerships

Community
Interview: Instructional Strategies

Preclinical Years

Single Lecture

Small Group and Clinical Work

Stories

Actionable
Implementation: UCSF SOM

- Work in progress
  - New curriculum type (Inquiry) – specific small group and a lecture to
    - bring awareness
    - tie thread together integrated content
  - Inquiry mini-course

- Next steps
  - Mapping the new curriculum
  - Connecting with content leaders
Make available this critical content beyond UCSF Guide for other institutions

Thank you
References

Gail Lee (sustainability.ucsf.edu)
UCSF Academic Senate Committee on Sustainability
Watts et. al, Lancet, 2015
Walpole & Pearson, Medical Teacher, 2015
Pearson, Medical Teacher, 2015
Sustainable Health Care Education, UK

Thank You!