Environmental Medicine
Beyond the Vision

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“Take two tablets prn for leaf curling and I’m referring you to a specialist to rule out Dutch elm disease.”
Disclosures

- My am self-employed as a consultant on issues of occupational and environmental health. My proprietorship is Occupational + Environmental Health & Medicine.

- I am the author of several books:
This Presentation

- Why Occupational “and Environmental” Medicine?
- What is “environmental medicine”, anyway?
- How can physicians actually practice “environmental medicine”?
- How can physicians contribute to “environmental medicine” and environmental concerns broadly?
Occupational and Environmental Medicine

- Environmental exposures are similar to occupational exposures, differ in degree
  - Measurement technology and interpretation
  - Physiological principles are the same
  - Primacy of allergic disease
  - Application of toxicology and epidemiology
  - Centrality of exposure assessment

- Environmental responsibilities

- Frequent clinical consultations
  - 16% in my clinic
  - Mostly IAQ/SBS, mold and pesticides

- Medicolegal work
  - Mostly pesticides, mold, hazardous waste, groundwater contamination
  - Class actions present special challenges

How can I both practice medicine and protect the environment?
Scope of OEM
What is “Environmental Medicine”?  

- Clinicians: diagnosis and management of disease related to environmental exposure (ACOEM, AOEC)  
- Public health professionals: preventing disease related to environmental exposure (APHA)  
- Ecosystem Health: Humankind on the planet  
- Activists: Physicians’ role in saving the earth (ISDE, PSR)  
- Alternative practitioners: “Clinical ecology”, MCS  
- Medical directors: Regulatory compliance, institutional public health, product stewardship
Alternative Views

THE PYRAMID OF TRIOS OF BODY ECOSYSTEMS

PITUITARY
SEX HORMONES
NEUROTRANSMITTERS
TRIO OF ECOSYSTEMS

ADRENALS
THYROID
PANCREAS
TRIO OF ECOSYSTEMS

LIVER
BLOOD
BOWEL
TRIO OF ECOSYSTEMS

Oxidative Regression To Primordial Cellular Ecology
Concepts of “Environmental Medicine”
Resolving the Confusion

"Clinical ecology" → (Scientific resolution)

Medical Model → Medical Model

Global Survival Model

Public Health Model → Public Health Model

Ecosystem Health Model → Ecosystem Health Model

Humankind's Place in the Ecosystem

Concepts of a Healthy/Unhealthy Environment that includes Humankind as an Integral Part
Some differences, as well.
Trends

- Getting away from cataloguing lists of environmental disease (e.g. ATSDR)
- Population health models over clinical models
  - Environmental exposures act subtly over a large population
  - Individual cases of documented disease rare
- Alternative medicine advocacy model
  - Constantly changing, dominates on web
  - Need to “take back” name of environmental medicine
  - Specific solutions for specific problems
  - General expertise not so highly valued
- Risk communication
- Litigation support
  - Specialized expertise is valued most.
Opportunities for Working in Environmental Medicine

- Natural extension of clinical scope of practice
- Demand for services
  - Clinical consultation
  - Litigation support (causation)
- Services to clients, employers
- Regulatory compliance
- Risk communication services
  - Pediatric environmental health, esp.
- Need for evidence-based services

Normah Specialist Medical Center in Kuching, Malaysia, attracts offshore patients by emphasizing their environment.
Business Model

- Government regulatory agencies
- Academic careers (NIEHS, EPA)
- Corporate medical departments, consultancy
  - Risk and liability management
  - Environmental standards compliance
  - Institutional public health
  - Product stewardship
- Consultation practice
  - Medicolegal practice, litigation support
  - Clinical (pro bono and in support of medicolegal)
Problems - 1

- Clinical services not viable unless subsidized
  - Not enough valid clinical activity to support a practice
  - High overhead and very time consuming
  - Payer reluctance after initial consultation
  - Necessary, however, for credibility as medical expert
- Expectations and stereotyping
  - Advocacy rather than evidence-based practice
  - Patients reject evidence-based practice
- Suspicion of irrelevancy
- Complexity
  - Multiple exposure
  - Ecosystem and human health
  - Perceptions
  - Laboratory services

“Holistic”, “wholistic”, or full of it?
Complexity
Problem - 2

- Fuzzy image
- Scope of practice not recognized, standardized
- Amateur hour: idea that anyone can play at environmental medicine
- Alternative medicine advocates, misinformation on web

Lovely and inspiring but not evidence-based medicine.
Solutions

- Broad preparation in environmental science
- Preparation in medicolegal practice, EBMDR
- Emphasis on issues most aligned with OM:
  - Institutional public health
  - Built environment (esp. “sick building syndrome”)
  - Compliance with environmental regulations
  - Product stewardship and life cycle impact
  - Product- and service-centered approach rather than media approach
The Green Physician

- Professional Commitment
  - Green hospitals and healthcare
- Career Commitment
  - Public health: environmental health
  - Occupational and environmental medicine
- Activist Commitment
  - Knowledgeable advocacy: CAPE, PSR
  - Community issues: be aware of physician’s special responsibilities!
- For further exploration of topic:

Anton Chekhov was the original “green physician”: conservation and public health advocate.
How Physicians Can Contribute

- Public and professional education
  - Foundational (integrating health into ecology)
  - Issue-specific (physician carries special responsibilities)
  - Correcting misinformation
- Leading by example (e.g. Green Hospitals)
- Leading through medical organizations
- Political action
- Documenting environmental problems
- Case finding (beware of cancer clusters!)
- “Population health”