Why Should Health Schools Embrace Integrative Health?

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No conflicting interests
What is Integrative Health?

- Seamless combination of personal and environmental interventions that restore and maintain wellness
- Maximum fitness
- Maximum quality of life
- As evidence-based as possible
- Human factors: patient-centred; education; decision-making.
Integrative Health Requires:

- Detailed patient counselling & individual circumstances: physical, mental, spiritual, environmental
- Lifestyle: nutrition, exercise, mental state
- Openness to other health systems or at least evidence-based interventions that fall outside of pharmaceuticals and surgery
- An emphasis on the mind-body connection as an adjuvant process in healing and recovery
Biomedicine

- Biomedicine classically includes technological diagnostics, pharmaceuticals, surgery, genetic engineering, superficial counselling, and a very generalized, but specific, approach to patient management.

- Usually at a high level of generalized evidence, often taken from R.C.T.’s
Why the Current Interest in Integrative Health?

• Patient is more than the disease (patient-centred care)
• Single magic bullets rarely exist
• New approaches learned from other traditional health systems, e.g. TCM
• Many diseases chronic and lifestyle-related
• Lifestyle influences development & maintenance of disease through genetic predisposition and epigenetics
• New approaches require lateral thinking & innovation
Why do medical schools sometimes resist Integrative Medicine?

- Fear of bogus therapies undermining credibility (Alternative Medicine)
- Old-style puritanical & reductionist teaching
- Failure to recognize patient self-empowerment and the mind-body-environment connection
- Limited critical thinking, lateral thinking and innovation
- Limited time in curriculum
What Have We Learned Recently?

- Patient-Centred Care
- Mind-Body & Meaning
- Patient & Environment (internal & external)
- New Therapeutics (understanding new processes and new derivatives from plants, bacteria, and fungi)
- Evidence-based care can be applied to other interventions other than biomedicine (including value, cost-effectiveness, safety)
Patient-Centred Care

- Patient is part of decision-making
- Educated & empowered
- Patient values
- Self-help
- Communication & empathy as major part of patient counseling
- Life-long effects on patient life-style and health

Concept of Fitness

• Fitness is the optimization of health and well-being
• An individual's fitness is manifest through her phenotype (interaction of genes with environment)
• Fitness of different individuals with the same genotype is not always equal
  – Epigenetics: interaction of genes with environment
• Epiphenomena of all types are important in the management of individual patients
• Fitness is life-long and adaptable
• Integrative medicine enhances fitness
Patient is part of decision-making

• Distress screening & lifestyle
• Mind-Body interventions for coping (self-evaluation & regulation)
• Highly activated patients are more likely to:
  o adopt healthy behavior
  o have better clinical outcomes
  o have lower rates of hospitalization
  o Have higher levels of satisfaction

• Integrative oncology: are we doing enough to integrate psycho-education? Sagar SM. Future Oncology 2016; 12: 2779-2783
Patient-centered care in cancer treatment programs: the future of integrative oncology through psychoeducation.
Results of an Integrative Consultation: Effects on Mind-Body Interaction

• Cognitive psychology, learning & neurobiology are connected

• Neurobiological research has demonstrated the effects on
  • Fatigue
  • Pain
  • Immunity
  • Increase adherence to anticancer treatment
  • Increase effectiveness
  • Less adverse effects
How Does the Integrative Consultation Help in Decision-Making?

- **Process** of decision-making is a skill that requires patient-education
- Uncertainty can result in poor decision-making, such as *choosing an unproven alternative therapy or bogus treatment*, instead of an evidence-based proven intervention
- Fears of adverse effects of the proven treatment
- Cultural biases
- Positive outcome is mind-body fitness and motivation
Mindfulness

- A mental state achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations
- Increasing empathy, compassion and emotion regulation
- Therapeutic presence
Empathy

The ability to understand and share the feelings of another

Iacoboni M. Annu. Rev. Psychol. 2009. 60: 653–70
Common Pathway in Mind and Body Interventions: Basal Ganglia & Limbic System

Meditation
Hypnosis
Music
Rhythm
Expression
Reiki
Placebo/Belief

Massage
Yoga
Tai Qi
Exercise
Acupuncture
The Common Pathway In Lifestyle effects on Fitness: Genomics & Epigenetics

• Cancers, arthritis, cardiovascular disease and diabetes have their roots in genomic inflammatory pathways that can be modified by the epigenetics of diet, exercise and mind–body techniques.

• Every opportunity should be taken to teach lifestyle modification during the cancer treatment program.
Type II Diabetes Mellitus

- Epigenetics
  - DNA methylation
  - Histone modification (acetylation, deacetylation)

- Genetics
  - Heritability of epigenetic changes
  - Family history of disease

- Environment
  - In utero environment
  - Maternal nutrition
Cancer may be caused by aberrant DNA methylation. The Yin-Yang diagram shows that epigenetics and genetics are equally important to prevent cancer.
Microbiome: H Pylori

Treatment: Clarithromycin, PPI (pantoprazole), metronidazole/amoxicillin
Inflammatory Bacteria versus Beneficial Probiotic Bacteria

- Intestinal Mucosal Cells
  - Normal tight junction
  - Leaky and inflamed
- Blood Stream
  - Circulating immune complex
- Blood Brain Barrier Breach
- Inflammation
- Autoimmunity
- Malabsorption & nutrient deficiency
Microbiome & Various Diseases

All these diseases have evidence for a role of the gut microbiota:
- Asthma/Eczema
- Inflammatory bowel disease
- Diabetes
- Colon Cancer
- Obesity
- Heart disease
- Non-alcoholic fatty liver disease
- Depression
Information-Integration: Prediction-Selection
-Multifactorial
-Integrating complexity
-Weighted connections
-Nested open & closed systems
-Dynamic systems
Integrative Health
TCM as a Precursor to Integrative Medicine

- Patterns
- Processes
- Connections
- Algorithms
- Functions
- Predictions
- Multiple Domains
- Multiple interventions
- Temporality
Chinese Medicine as an Ancient Model for Modern Algorithms to Normalize Health
Dynamical Systems Modeling

Figure 8.13
A more detailed model of physician prescription behavior.
Systems Modeling in Integrative Oncology

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Abstract
Systems modeling provides an integrated framework to capture and analyze diverse and multidisciplinary data in a standardized manner. The authors present the Integrative Oncology Systems Model (IOSM) to help assess the impact of behavior modification and various therapeutic interventions on cancer development and progression and the resultant effect on survival and quality of life outcomes.
Elements of cancer immunity and the cancer–immune set point
Daniel S. Chen & Ira Mellman
Summary: Integrative Patient-Centered Care

- Anti-Cancer Therapies
- Supportive Care
- Rehabilitation
- Life-Style Modification

- Patient Values & Goals

- Accountability
- Information Services
- Navigation
- Organization

Health Care Practitioners
• THE HEALTH AND WELL-BEING OF MY PATIENT will be my first consideration

• I WILL ATTEND TO my own health, well-being, and abilities in order to provide care of the highest standard