

# Appraising Complementary and Alternative Medicine (CAM) in Common Pediatric Infections

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# CAM Overview (1)

- Alternative Medicine – [as defined by Eskinazi (1998)] – “A broad set of health care practices that not readily integrated into the dominant health care model because they pose challenges to diverse societal beliefs, and practices (cultural, economic, scientific, medical, and educational).”

# CAM Overview (2)

- Alternative Medicine – [as defined by National Center for Complementary and Alternative Medicine or NCCAM] – “A broad range of healing philosophies (schools of thought), approaches, and therapies that mainstream Western (conventional) medicine does not commonly use, accept, study, understand, or make available.”

# CAM Overview (3)

- It was NCCAM that broadened the definition by adding “complementary” to become “Complementary and Alternative Medicine (CAM)”

# Implications of the NCCAM Definition

- CAM can now be used as adjunct to modern medicine (complementary)
- CAM can be used in place of conventional therapy (alternative)

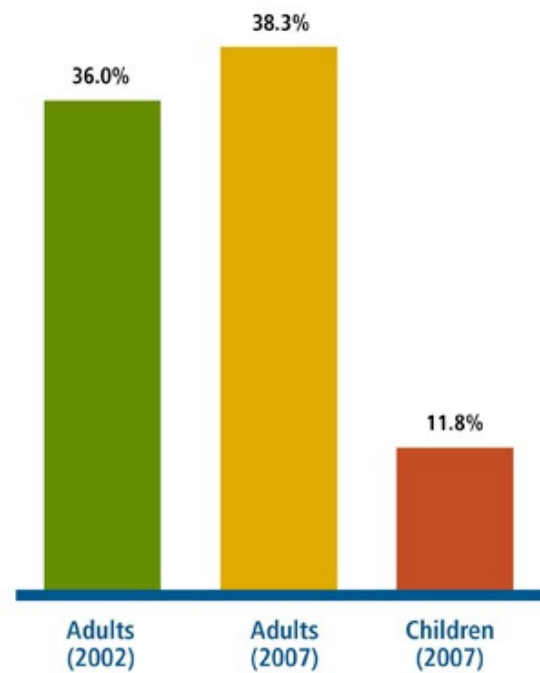
# History of CAM

- Originated from a myriad of philosophies dating back thousands of years
- Ranging from healing within a system of spiritual practice of cultures such as American Indians, Hindi (Ayurveda), Tibet, Japan (Reiki), China (TCM) to modern day use of gadgets such as zapper, magnets, alkaline water ionizer, clustered water

# Some Reasons for CAM

- Spiraling health costs
- Dissatisfaction with the “cost effective” practice which are often dictated by insurance companies
- Disillusionment with high-tech, low touch health care system, often treating only symptoms but not the cause
- Inaccessible health care from conventional medicine

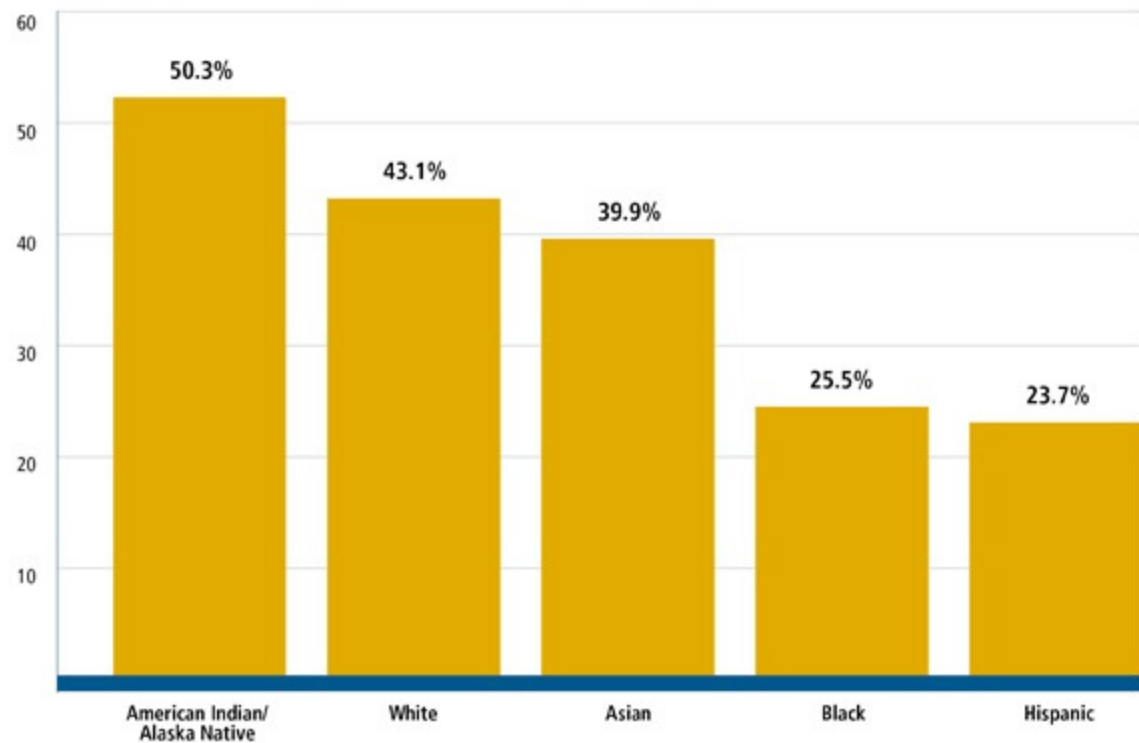
## CAM Use by U.S. Adults and Children



Source: Barnes PM, Bloom B, Nahin R. *CDC National Health Statistics Report #12. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007.* December 2008.

Figure 1: CAM Use by U.S. Adults and Children

## CAM Use by Race/Ethnicity Among Adults - 2007



Source: Barnes PM, Bloom B, Nahin R. *CDC National Health Statistics Report #12. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007.* December 2008.



# **Cursory Information on the use of CAM for Infectious Diseases (all ages)\***

- Common cold remedies – 95 types of CAM noted
- Pneumonia – 52 types of CAM used
- Fungal Infections - 75

\*Ernst, E. The Journal of Infection Vol 48, Issue 2, Feb 2004)

# Overview of CAM Systems

- Chinese and Indian Medicine

- China – traditional medicine based on the philosophy of Yin & Yang and the flow of Chi energy based on the meridians
- Indian Medicine – Ayurveda – to bring body, mind and spirit into harmony within an individual

## *Overview of CAM Systems -continued*

- Homeopathic medicine – philosophy that the body can heal itself and can be activated by substances:
  - Law of Similars (like cures like), example: onions produce tears and can be used for colds and respiratory allergies
  - Law of infinitesimal Dose – only a very very small dose is required to effect a remedy
  - An individualized treatment is given to a specific person even if the illness may be the same; all characteristics are take into account to construct the “person’s healing rubric”

## *Overview of CAM Systems -continued*

- Naturopathic Medicine – a healing modality derived from ancient medical systems (Ayurveda, TCM, Greek medicine); cures are derived from nature which also has the philosophy that the body has the ability to cure itself; healing includes nutrition, homeopathy, acupuncture, herbal medicine, physical therapy, stress reduction, counseling

## *Overview of CAM Systems -continued*

- Diet, nutrition, and lifestyle changes: this overlaps with the holistic approach of “wellness”; uses nutritional supplements, vitamins, minerals, mind-body exercise, relaxation of mind & body and lifestyle changes

## *Overview of CAM Systems -continued*

- Herbal Medicine – foundation of modern day medicines derive from plants; example: digoxin from foxglove, aspirin from willow bark, quinine from cinchona
  - Basically, herbal medicines have been embodied in the pharmacopeias of countries; example: German Commission E, British Pharmacopeia
    - *Note: The US does not have a herbal pharmacopeia but of the top 10 herbal products sold in the United States, only 4 (Garlic, Ginseng, St. John's Wort and Saw Palmetto) have ever shown a statistically significant beneficial effect (as reported in The American Journal of Medicine on April 1, 2004).*

## *Overview of CAM Systems -continued*

- Manual Healing such as touch, chiropractic techniques, pressure, energy (Qi-gong)
- Mind-body therapies includes music, dance, spiritual or religious practices, imagery
- Pharmacologic such as chelation therapy, hyperbaric oxygen therapy
- Bioelectromagnetic applications – use of magnets, negative ion generator

# Options for Appraising CAM

- Evidence-based Medicine
- Medical Education Curriculum
- Physicians being oriented to CAM modalities and philosophy
- Research by private institutions/groups
- National policy and information



# Evidence-based Medicine – CAM in Pediatric Infectious Diseases

- **From American Journal of Health-System Pharmacy** - current data are generally inadequate to support CAM for the prevention or treatment of URTI in children
- AAP (American Academy of Pediatrics)
  - **Biologically based practices:** evaluation is limited by variations in quality and content however, probiotics have been increasingly recommended by general pediatricians
  - **Mind-body medicine:** prayer is a common adjunct but no RCTs have been done
  - **Biofield therapies** (homeotherapy, therapeutic touch, magnet therapy, Reiki, and qi gong) Only acupuncture have been studied for headache but none for infectious diseases

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# Centers for CAM Research/ Information

- US NIH, National Center for Complementary and Alternative Medicine (NCCAM)
- Institute for Complementary Medicine (UK)
- Research Council for Complementary Medicine (UK)
- National Institute for Complementary Medicine (Australia)
- National Institute of Health – UPM
- Philippine Institute for Traditional & Alternative Health Care (PITACH) - DOH

# Level Type Evidence for CAM

- well-designed meta-analysis of random controlled trials, or one well designed random controlled trial
- other clinical trials: well-designed controlled trials without randomization, well-designed experimental studies
- well-designed descriptive and observational studies, comparative studies, correlational studies, case controlled studies
- expert committee reports, peer reviewed published review, conclusions of reputable regulatory agencies
- traditional references

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PROSEA

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Plant Resources of  
South-East Asia 12

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(1) Medicinal and  
poisonous plants 1

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PHILIPPINE  
PHARMACOPEIA 1  
(PP 1)  
with Supplement



# Academe

- Institutions which have included CAM in the curriculum
- Exposure of students to research involving CAM



# Exposure of Physicians to CAM/ Acceptance of Integrative Medicine

- Institutions offering training programs for CAM such as acupuncture
- Policy briefs of specialty societies in relation to the practice of integrative medicine

# Research Priorities

- US, UK, Canada, Australia  
(predominantly  
mainstream/conventional medicine)  
providing priority research on CAM
- National/Government Agencies
  - PCHRD (NUHRA)

# Research by the private sector

- Residency training
- Meta analysis
- Support for local research- Medical Societies' research priorities
  - Philippine Medical Association?
  - Philippine Pediatric Society?
  - Pediatric Infectious Disease Soc. of the Phil.?
  - American Academy of the Pediatrics? - Most CAM therapies have not been evaluated rigorously in children, and the National Center for Complementary and Alternative Medicine has not yet made pediatric research a priority.



**Thank you!**