Integrative Medicine
Fraud or Frontier?

…and why Behavioral Medicine May Care

Society of Behavioral Medicine
April 13, 2012
Overview

- Define and present the latest US data on the use of integrative medicine among men and women
- Describe the expansion of integrative medicine and its link to behavioral medicine
- Touch on some of the challenges and current directions in integrative medicine

You Decide: Fraud or Frontier?
Integrative Medicine?

“Integrates the best of evidence-based conventional and complementary medicine”

what is meant by ‘integration’?

- Consideration of “whole person”
- Partnership between practitioners and patient
- Informed by evidence of therapeutic efficacy
Complementary Medicine*

- Natural Products
  - Dietary supplements

- Mind and Body
  - Meditation
  - Yoga/Tai Chi
  - Massage
  - Acupuncture

*NIH, NCCAM
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Complementary / Integrative Medicine Use Increasing

- National Health Interview Survey in 2002 & 2007
- National random sample
  - 2002: 31,044 adults
  - 2007: 23,393 adults & 9,417 children

Barnes et al., CDC, 2004, 2008
Over 38% of adults using complementary medicine within the past 12 months

Total estimated adults using CAM
- over 115 million
- increase of 12 million in 5 years

Almost 12% of children given complementary medicine within the past 12 months

Why Public Interest in Integrative Medicine?

- Belief that integrative medicine emphasizes treatments that are “natural”
- Some people are interested in avoiding medication and medical procedures
- Integrative Medicine practitioners emphasize the therapeutic relationship
- Goal of optimizing health and emotional wellbeing
The most frequently cited reason for using integrative medicine was health promotion or wellness – 45%.

*Davis et al., Health Services Res, 26, 2011*
Integrative Medicine and “Wellness”

Prevent illness/or general wellness: 77%
Help reduce pain/treat painful condition: 73%
Treat specific health condition: 59%
Supplement conventional medicine: 53%

U.S. Adults 50+ (n=539) Sampling error: ± 4.2% AARP/NCCAM Survey
CAM Use by Age - 2007

Most Common CAM Therapies

Figure 3 10 Most Common CAM Therapies Among Adults - 2007

Therapies with significant increases between 2002 and 2007 are

<table>
<thead>
<tr>
<th>Therapy</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep breathing</td>
<td>11.6%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Meditation</td>
<td>7.6%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Massage</td>
<td>5.0%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Yoga</td>
<td>5.1%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

Barnes, Bloom, et al NHIS, 2007
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Integrative Medicine in US Hospitals

- Hospitals offering Integrative Medicine services
  - 8% in 1998
  - 17% in 2002
  - 27% in 2005
  - 37% in 2008
  - 42% in 2011

- Key reasons
  - Patient demand 85%
  - Clinical evidence 74%

AHA Health Forum, Sept. 2011
1999: Consortium Formed

Driven by interest of the public and health professionals who wanted to offer patients health-promoting options
2012 - 50 Members

Albert Einstein/Yeshiva University
Aurora Health Care
Boston University
Cleveland Clinic
Columbia University
Duke University
Georgetown University
George Washington University
Harvard Medical School
Johns Hopkins University
MD Anderson
Mayo Clinic
McMaster University, Ontario
Northwestern University
Ohio State University
Oregon Health & Science University
Stanford University
Thomas Jefferson University
Tufts University
University of Alberta
University of Arizona

University of Calgary
University of California, Irvine
University of California, Los Angeles
University of California, San Francisco
University of Chicago
Cincinnati College of Medicine

University of Colorado at Denver
University of Connecticut
University of Hawaii at Manoa
University of Illinois at Chicago

University of Maryland
University of Massachusetts
University of Medicine & Dentistry of New Jersey
University of Michigan
University of Minnesota
University of New Mexico
University of North Carolina, Chapel Hill
University of Pennsylvania
University of Pittsburgh
University of Texas, MB
University of Vermont
University of Washington
University of Wisconsin, Madison
Vanderbilt University
Wake Forest University
Yale University
Consortium of Academic Health Centers (AHC) for Integrative Medicine

- Application submitted by a Dean at the Academic Health Center
- Each center must have two of these three integrative medicine programs:
  - Research – *interdisciplinary* researchers
  - Clinical care – *multidisciplinary* clinicians
  - Education – *interprofessional* educators
Meanwhile… well before “integrative medicine”

- 1979 – SBM first meeting
  - The Society is a multidisciplinary organization of clinicians, educators and scientists dedicated to promoting the study of the interactions of behavior with biology and the environment, …”
  - and the application of that knowledge to improve the health and well-being of individuals, families, communities and populations.

- Twenty years of progress from 1979 …
  - 1999 – Integrative Medicine Consortium
- Identified target behaviors to reduce risk and promote health
- Documented the Stress – Susceptibility to illness link / decades of stress management
- Demonstrated effectiveness of
  - Smoking cessation strategies
  - Health advantages of physical activity
  - Family-based obesity treatments
- Reduction in the incidence of Type 2 diabetes with lifestyle interventions
20+ yrs 1979 - 99

Behavioral Medicine

Behaviors/ Stress

Mechanisms

Health Outcomes

Interventions
Some of the public have “Taken the Road Less Traveled” and pressed care and attention.
Market Responds to Public Interest
Much More Needs to be Done, *but*…

- Public engagement is obviously not enough – it is not reaching all who are “at risk.”
- But, public interest is changing the landscape
- Part of the public interest in lifestyle changes & integrative medicine is due to progress generated by SBM over the decades

*Lifestyle Changes & Integrative Medicine*
Integrative Medicine

- Acupuncture
- Yoga/Tai Chi
- Meditation
- Massage

Stress Management

- Physical Activity
- Nutrition
- Weight Loss
- Biofeedback

Conventional Medicine

- Surgery
- Medication
- Radiation

Conventional Medicine

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“Isn’t it time to close the chasm between what we know about health determinants and what we put into practice to improve health?”

“Why don’t we invest more in behavioral change interventions that could improve health?”

“One reason is that “we” are several different constituencies that collaborate too rarely.”

Bonnie Spring, *Translational Behavioral Medicine*, 2011
Integrative Medicine:

*Fraud or Frontier?*

It appears to be a frontier ... *a public response to progress made by SBM*

But there are also claims that can suggest “fraud”...
Alternative and complementary medicine include modalities supported by “claims” and anecdotal reports.

“The plural of claims is not evidence”

Integrative Medicine is evidenced-based.
Integrative Medicine working to build the evidence base

- Safety
- Efficacy
- Mechanism
Yoga at SBM

- Morning Exercise each day
- Symposium: Yoga as an Emerging Intervention for Cancer Patients and Post-Treatment Survivors
  Chairs: Suzanne Danhauer and Crystal Park
Iyengar Yoga for Chronic Low Back Pain (CLBP)

CLBP  20-25% of all medical claims
$34 billion in direct medical costs

- 90 patients, CLBP randomized
  - Yoga - 24 weeks, 2 x week, 90 min. (N = 43)
  - Control - care as usual (N = 47)

- Outcomes
  - Oswestry Disability Index
  - Visual Analog Pain Scale

Iyengar Yoga for Chronic Low Back Pain


\[ P < 0.0125 \] \[ P < 0.01 \]
Yoga for Chronic Low Back Pain (CLBP)

- 101 adults chronic low back pain
- Randomized to 12-week program
  - Yoga
  - Conventional exercise class
  - Self-help book
- Outcome:
  - Roland disability index
  - Back pain

Sherman et al., Ann Intern Med, 143: 849-857, 2005
Yoga Reduces Disability & Pain

- At 12 weeks
  - Yoga > Self-help Disability - 3.4 (p < .001)
  - Yoga > Exercise Disability - 1.8 (p = .03)

- At 26 weeks
  - Yoga > Self-help Disability - 3.6 (p < .001)
  - Yoga > Self-help Pain - 2.2 (p < .001)

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Larger Trial: Chronic Low Back Pain
Yoga vs Conventional Stretching

- 228 adults chronic low back pain
- Randomized to 12-week program
  - Yoga class
  - Conventional stretching class
  - Self-help book

Outcome:
- Roland disability index
- Bothersomeness

Primary outcomes for yoga, stretching, and self-care at baseline, 6, 12, and 26 weeks

Findings suggest: Yoga’s benefits largely attributable to physical benefits of stretching and strengthening muscles and not to its mental components.
Which will be better maintained?

Mindfulness Meditation at SBM

- Paper Session: Mindfulness and Mindfulness-Based Health Interventions
  Chair: Lynn DeBar
Breathing Meditation for BP in African American Ninth Grade Students

- 121 students with systolic BP between 50-95\textsuperscript{th} percentile
- Randomized to 12-week program
  - Breathing Awareness Meditation
  - Bovill Life Skills
  - Health education
- Outcomes:
  - Hostility
  - 24 hour BP

Wright et al., *J Black Psychology, 37*: 2011
Breathing Meditation for BP in African American Ninth Grade Students

**Figure 2.** Treatment $\times$ time interaction on 24-hour systolic blood pressure

Wright et al., *J Black Psychology, 37*: 2011
Breathing Meditation for BP in African American Ninth Grade Students

Figure 1. Treatment × time interaction on hostility scores

Wright et al., *J Black Psychology, 37*: 2011
Stress, Inhibited Breathing and Blood Pressure

- Potential treatment approach – Mindful breathing
- Train prehypertensive people to apply mindful breathing in stress-inducing situations
- Providing biofeedback regarding inhibited breathing
Mindful Breathing Effects on Expired CO$_2$, Breathing Rate and BP

- 128 women with prehypertension
- Randomized to 8-wk program with 12-wk follow-up
  - Mindful Breathing
  - Monitor rate and expired CO$_2$
  - Health Education Control

Outcome
- 24 hour BP
- Resting and ambulatory breathing rate and expired CO$_2$

Chesney et al, UCSF, 2012
Challenges and Current Directions in Integrative Medicine Research

- **Challenges**
  - Selection of controls and comparison groups
  - “Placebo” responses

- **Current Directions**
  - RCT vs comparative effectiveness designs
  - Investigate mechanisms
  - Explore use of technology
  - Begin studying adherence
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“One reason is that “we” are several different constituencies that collaborate too rarely.”

Bonnie Spring, 2011
- Multidisciplinary organizations
- Interested in interaction of biology, behavior and environment, and
- Share the goal of improving health and well-being of individuals, families, communities and populations
Behavioral and Integrative Medicine

Both want to bring about change

To see our society invest more in behavior change interventions that promote health

Accessible interventions that encourage people to participate in choices to enhance resilience, prevention illness and improve the quality of their lives.
In Appreciation

David Abrams  Jean Kristeller
Michael Acree  Wolf Mehling
Wendy Adelson  C. Tracy Orleans
Andy Avins  Crystal Park
Vernon Barnes  Tom Pickering
Sheldon Cohen  Lynda Powell
Susan Czajkowski  Neil Schneiderman
Richard Davidson  Karen Sherman
Susan Folkman  Bonnie Spring
Scott Harris  Catherine Stoney
Russell Glasgow  Esther Sternberg
Gail Ironson  Stephen Weiss
Laura Lee Johnson  Redford Williams
Jon Kabat-Zinn  Eileen Ziegler
Peter Kaufman  David Anderson

My colleagues at UCSF