Managing Stress
Building Resilience

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Disclosures

- I have no conflicts of interest to disclose, other than being a recipient of funding from NIH and several foundations for educational initiatives.
- I am not a cognitive psychologist or a mental health professional.
- Renal physiologist, medical educator, and a general skeptic...
- *but with an open mind*
Outline

- The reality of physician stress and burnout
- Insights from the physiology of stress
- Outcomes from the mind-body program at Georgetown University School of Medicine
- Lessons Learned – *Cause for optimism*
Think — Pair — Share

What are your Stressors?
Chronic Stress

Strategies:
- Cognitive Reappraisal
- Positive Psychology Reflection
- Appreciative Inquiry
- Finding Meaning in Work
- **Mindfulness**
- **Meditation**

Burnout

Resilience
“Burnout is a response to chronic stressors that wear on a person over time—not acute ones such as a big event or a big change”

Christina Maslach, PhD

Courtesy of Dr. Anne Nedrow
Characteristics of **Burnout**

- **Emotional Exhaustion**
  (feeling overextended and depleted of one’s emotional/physical resources)

- **Cynicism and Hostility**
  (callous, detached response to various aspects of the job)

- **Negative Self-evaluation**
  (feelings of incompetence and lack of achievement)

- **Decreased ability to express empathy**

Associated with adverse health consequences, including stress-related symptoms and increased substance use

*Maslach et al. Job Burnout*

*Ann Rev Psychol* 2001. 52:397-422
1 out of 3 Physicians Experience Burnout

Clinical Implications

Physicians who are stressed are likely to commit more errors.

Burnout appears to alter both the physician-patient relationship and the quality of care physicians provide.

Physician’s sense of professional fulfillment is positively correlated with patient’s adherence to medication, exercise, and diet regimens.


Courtesy of Dr. Anne Nedrow
Intervention

An intensive phase (2.5 hr/8 wk)

All day (7 hr) session (week 6-7)

A maintenance phase (10 monthly)

Each Session

15 min didactic material (weekly)

(awareness, burnout, self-care)

Formal mindfulness meditation

Body scan

Sitting meditation

Walking meditation

Mindful movement

Narrative/Appreciative Inquiry

Exercises

Association of an Educational Program in Mindful Communication With Burnout, Empathy, and Attitudes Among Primary Care Physicians

Michael S. Krasner, MD
Ronald M. Epstein, MD
Howard Beckman, MD
Anthony L. Suchman, MD, MA
Benjamin Chapman, PhD
Christopher J. Mooney, MA
 Timothy E. Quill, MD

Primary care physicians report alarming levels of personal and patient distress. Up to 60% of practicing physicians report symptoms of burnout, defined as emotional exhaustion, depersonalization (treating patients as objects), and low sense of accomplishment. Physician burnout has been linked to poorer quality of care, including patient dissatisfaction, increased medical errors, and lawsuits and decreased ability to express empathy. Substance abuse, automobile accidents, stress-related health problems, and marital and family discord are among the personal consequences reported. Burnout can occur early in the medical education process. Nearly half of all third-year medical students report burnout and there are strong associations between medical student burnout and suicidal ideation.

For editorial comment see p 1318.

CME available online at www.jamaevidence.com and questions on p 1374.

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Maslach Burnout Scale (MBS)

Emotional Exhaustion

Krasner et al, JAMA. 302: 1284-1293, 2009
Jefferson Scale of Physician Empathy (JSPE)

Total Empathy

Baseline Preintervention 8-Week 12 Months 15 Months

Krasner et al, JAMA. 302: 1284-1293, 2009
Baer Mindfulness Scale (BMS)

Total Mindfulness

Krasner et al, JAMA. 302: 1284-1293, 2009
Stress Response:

Effect on the Hypothalamic-Pituitary-Adrenal Axis

“Fight-or-Flight” Response
HPA Axis:

Regulation by negative feedback
Importance of the “Return to Baseline”

Sustained Cortisol Impairs Feedback Regulation: Implications for Coping with Novel Stressors

Chronic Stress impairs memory, learning, and leads to premature cognitive decline

Fig. 4. Patterns of HPA response to challenge.
Stress and Mortality

- Distressed caregivers die earlier

Schulz & Beach (1999) JAMA
Neural Connections: Cognitive-Emotional-Autonomic
The Stress Response

- Hypothalamus
- Cortical inputs
- Limbic System

Is There a Way to Quiet the Hypothalamus?
Mind-Body Medicine

- Mind-Body Medicine utilizes the connection and interaction between the mind and the body. Each has a powerful effect on the other.

- can modulate the impact that physical, emotional, mental, social and spiritual aspects of our lives have on our health and well-being.
Mind-Body Medicine: Therapies

- Meditation
- Imagery
- Biofeedback
- Autogenic Training (self-hypnosis)
- Breathing Techniques
- Exercise
- Yoga, Tai Chi
- Group Support
Meditation

- Intentional self-regulation of attention conducted without judgment and focused on observation of the present moment

When we are able to focus on just what is happening in the present moment, our minds cannot be anxious, worried or distressed about other issues.
Benefits of Meditation

Physiological Benefits

- Decrease in hypertension
- Decrease in heart rate
- Decreased levels of cortisol
- Reduced sympathetic arousal
- Strengthened immune system
- Reduced levels of pain

“Physiology of de-stress”
Benefits of Meditation

Psychological Benefits

- Reduced stress level
- Decreased anxiety
- Decreased depression
- Improved confidence and concentration
- Increased peace of mind, optimism and self-worth

“Physiology of de-stress”
Abbreviated Mindfulness Intervention for Job Satisfaction, Quality of Life, and Compassion in Primary Care Clinicians: A Pilot Study

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ABSTRACT

PURPOSE Burnout, attrition, and low work satisfaction of primary care physicians are growing concerns and can have a negative influence on health care. Interventions for clinicians that improve work-life balance are few and poorly understood. We undertook this study as a first step in investigating whether an abbreviated mindfulness intervention could increase job satisfaction, quality of life, and compassion among primary care clinicians.

...participating in an abbreviated mindfulness training course adapted for primary care clinicians was associated with reductions in indicators of job burnout, depression, anxiety, and stress.

Ann Fam Med 11:412-420, 2013
Clinicians rating themselves as more mindful engage in more patient-centered communication and have more satisfied patients.
Experiential Exercise
Educational Goals (MSOP)

Graduating physicians must be:

- Altruistic
- Knowledgeable
- Skillful
- Dutiful
Educational Goals

- Altruism
  - Compassion and empathy
  - Trustworthiness and truthfulness
  - Understanding and respect for the roles of other health care professionals
  - Understanding of the ethical precepts of the profession
Behaviors Reflecting Professionalism

- Altruism
- Honor and Integrity
- Caring and Compassion
- Respect
- Responsibility
- Accountability
- Excellence and Scholarship
- Leadership
  - Cultural Sensitivity
  - Service
  - Codes of Ethics
Decline in Empathy in Medical School

Newton et al *Academic Med* 83:244-249, 2008
Empathy Decline and Its Reasons: A Systematic Review of Studies With Medical Students and Residents

Melanie Neumann, PhD, Friedrich Edelhäuser, MD, Diethard Tauschel, MD, Martin R. Fischer, MD, Markus Wirtz, PhD, Christiane Woopen, MD, PhD, Aviad Haramati, MD, and Christian Scheffer, MD, MME

Abstract

Purpose
Empathy is a key element of patient-physician communication; it is relevant to and positively influences patients’ health. The authors systematically reviewed the literature to investigate changes in trainee empathy and reasons for those changes during medical school and residency.

Method
The authors conducted a systematic search of studies concerning trainee empathy published from January 1990 to January 2010, using manual methods and the PubMed, EMBASE, and PsycINFO databases. They independently reviewed and selected quantitative and qualitative studies for inclusion. Intervention studies, those that evaluated psychometric properties of self-assessment tools, and those with a sample size <30 were excluded.

Results
Eighteen studies met the inclusion criteria: 11 on medical students and 7 on residents. Three longitudinal and six cross-sectional studies of medical students demonstrated a significant decrease in empathy during medical school; one cross-sectional study found a tendency toward a decrease, and another suggested stable scores. The five longitudinal and two cross-sectional studies of residents showed a decrease in empathy during residency. The studies pointed to the clinical practice phase of training and the distress produced by aspects of the “hidden,” “formal,” and “informal” curricula as main reasons for empathy decline.

Conclusions
The results of the reviewed studies, especially those with longitudinal data, suggest that empathy decline during medical school and residency compromises striving toward professionalism and may threaten health care quality. Theory-based investigations of the factors that contribute to empathy decline among trainees and improvement of the validity of self-assessment methods are necessary for further research.
Relationship Between Burnout and Professional Conduct and Attitudes Among US Medical Students

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Anne Eacker, MD
William Harper, MD
David Power, MD, MPH
Steven J. Durning, MD
Matthew R. Thomas, MD
Christine Moutier, MD
Daniel Satele, BA
Jeff Sloan, PhD
Tait D. Shanafelt, MD

Context The relationship between professionalism and distress among medical students is unknown.

Objective To determine the relationship between measures of professionalism and burnout among US medical students.

Design, Setting, and Participants Cross-sectional survey of all medical students attending 7 US medical schools (overall response rate, 2682/4400 [61%]) in the spring of 2009. The survey included the Maslach Burnout Inventory (MBI), the PRIME-MD depression screening instrument, and the SF-8 quality of life (QOL) assessment tool, as well as items exploring students’ personal engagement in unprofessional conduct, understanding of appropriate relationships with industry, and attitudes regarding physicians’ responsibility to society.

Main Outcome Measures Frequency of self-reported cheating/dishonest behaviors, understanding of appropriate relationships with industry as defined by American Medical Association policy, attitudes about physicians’ responsibility to society, and the relationship of these dimensions of professionalism to burnout, symptoms of depression, and QOL.

Results Of the students who responded to all the MBI items, 1354 of 2566 (52.8%) had burnout. Cheating/dishonest academic behaviors were rare (endorsed by <10%) in comparison to unprofessional conduct related to patient care (endorsed by up to 43%). Only 14% (362/2531) of students had opinions on relationships with industry consistent with guidelines for 6 scenarios. Students with burnout were more likely to report engaging in 1 or more unprofessional behaviors than those without burnout (35.0% vs 21.9%; odds ratio [OR], 1.89; 95% confidence interval [CI], 1.59-2.24). Students with burnout were also less likely to report holding altruistic views regarding physicians’ responsibility to society. For example, students with burnout were less likely to want to provide care for the medically underserved than those without burnout (79.3% vs 85.0%; OR, 0.68; 95% CI, 0.55-0.83). After multivariable analysis adjusting for personal and professional characteristics, burnout was the only aspect of distress independently associated with reporting 1 or more unprofessional behaviors (OR, 1.76; 95% CI, 1.45-2.13) or holding at least 1 less altruistic view regarding physicians’ responsibility to society (OR, 1.65; 95% CI, 1.35-2.01).

Conclusion Burnout was associated with self-reported unprofessional conduct and

52.8% of medical students who responded had elements of burnout.

Students with burnout were more likely to report engaging in 1 or more unprofessional behaviors than those without burnout. (35.0% vs 21.9%; odds ratio [OR], 1.89; 95% confidence interval [CI], 1.59-2.24).
Competency-Based Medical Education

1. Effective Communication
2. Basic Clinical Skills
3. Using Basic Science in the Practice of Medicine
4. Diagnosis, Management and Prevention
5. Life-long Learning
6. Self-Awareness, Self-Care, and Personal Growth
7. Social/Community Contexts of Healthcare
8. Moral Reasoning and Clinical Ethics
9. Problem-solving
Specific Aim

To increase student understanding of self-awareness and self-care by providing a unique experiential and didactic introduction to Mind-Body Medicine
Mind-Body Medicine Program
at Georgetown U School of Medicine

Goal of Mind-Body Medicine Skills Program

- Mind-Body approaches are not only effective in helping to reduce stress and anxiety, but also teach the power of self-awareness and self-care.

- In order for students to understand the potential and applicability of mind-body approaches in healthcare, we believe it is important for them to experience these techniques and gain insight about themselves.
Mind-Body Medicine Program
at Georgetown U School of Medicine

Objectives

- To increase self-awareness of emotional, physical, mental, social and spiritual aspects of one’s life

- To increase personal self-care through guided experiences and daily practice.

- To foster non-judgmental, supportive collegial relationships
Mind-Body Medicine Program at Georgetown U School of Medicine

- **Format of groups:**
  - 10 students and 2 faculty facilitators per group
  - Participants (voluntarily sign up for the course) meet once a week for 2 hours for 11 weeks per semester for this “journey of self-discovery”

- **Structure of Each Session**
  - A safe environment must be created that adheres to certain guidelines
    - confidentiality, respect, compassionate listening, non-judgment
  - Check-in (sharing of new reflections and insights)
  - Introduction of a new mind-body medicine skill
  - Process the experiential exercise (sharing insights)
Mind-Body Medicine Program
at Georgetown U School of Medicine

Skills and Experiences

- Meditation (mindfulness/awareness, concentrative)
- Guided Imagery (several types)
- Autogenic training/biofeedback
- Art (emphasis on non-cognitive approaches)
- Music (used in meditation and imagery sessions)
- Movement (shaking, dancing, exercise)
- Writing (journals, dialogues, service commitment)
- Group support
Mind-Body Medicine Program
at Georgetown U School of Medicine

Outcomes

Perceived Stress (*Perceived Stress Scale*)

Mindfulness (*Freiburg Mindfulness Inventory*)

Empathy (*Interpersonal Reactivity Index*)
Implementation and Scope of the Mind-Body Medicine Skills Program

Over 13 years

- >90 trained faculty facilitators (clinicians, scientists, educators)
- >1,800 medical students participated
- >280 graduate students (MS and PhD)
- ~90 nursing students
- >160 students (Law, Business, Foreign Services Schools at GU)
- >70 faculty participants (including from curriculum committee)

Over 260 groups and over 2600 participants

*Embraced by the School of Medicine as essential for a core competency (self-awareness and self-care)*
Students in Georgetown University School of Medicine’s Mind-Body Skills course begin a session with a period of meditation.

**Spotlight on Mind-Body Skills:** A unique program blends science and humanism by fostering student self-awareness and self-care. See page 2.
Contributing Faculty and Students

Kevin Motz, M’13
Hakima Amri, PhD
Kristi Graves, PhD
Neha Harwani, MS ’12
Meredith Riddle, MS ’09

Claire Gross, M’13
Mary Ann Dutton, PhD
Nancy Harazduk, MSW, MEd,
Michael Lumpkin, PhD
Pamela Sanders, PhD

Supported by grants from NCCAM and the Institute for Integrative Health
Faculty Training in Mind-Body Medicine

October 8–11, 2015

Educating for Enhanced Self-Awareness and Self-Care

Originating at Georgetown University School of Medicine, this experiential program provides faculty at health professional schools with the training, tools, and strategic thinking necessary to implement mind-body medicine skills groups in their institutions.

During a three-day weekend retreat on Maryland’s Eastern Shore, faculty will be introduced to meditation, guided imagery, biofeedback, breathing techniques, and other mind-body approaches that can alleviate stress and foster self-awareness and self-care. Participants will experience the power of these approaches first-hand while learning how to lead mind-body groups for students.

The program includes seven group sessions, several individual activities, short didactic presentations, and daily yoga. Participants are provided with all course materials, enabling them to launch similar programs in their institutions after the retreat.

WHEN:
October 8–11, 2015

WHERE:
Aspen Wye River Marriott Conference Center,
Queenstown, Maryland

WHO SHOULD APPLY:
Institutions Implementing Programs in Mind-Body Medicine

- Georgetown University School of Medicine (medical students, residents)
- Oregon Health and Sciences University (medical students)
- University of Cincinnati College of Medicine (medical/allied health)
- University of Washington (medical students)
- University of Vermont (medical students)
- University of North Dakota Medical School (medical students)
- Charite University Medical School, Germany (medical students)
- University of Essen-Duisenberg Medical School, Germany (medical)
- University of Liverpool, UK (medical students)
- Texas College of Osteopathic Medicine (medical students)
- Stanford University, Anesthesia Residency Program
- University of Western States (chiropractic and other CAM professions)
- Oregon College of Oriental Medicine (acupuncture and DAOM)
- Mid-Sweden University, Sweden (nursing students)
- Ben Gurion University School of Nursing, Israel (faculty retreat)
Goal of the Study

To determine whether facilitation of MBM groups is associated with any changes in professional identity, self-awareness and/or perceived stress in the faculty and staff facilitators.
We used a mixed-methods cross-sectional design to obtain qualitative and quantitative responses from 62 MBM facilitators. They were emailed a link to a secure, one-time online survey that took approximately 15 minutes to complete.
## Quantitative Results

### Perceived Stress Score (PSS)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBM Facilitators</td>
<td>13.0 ± 4.4</td>
</tr>
<tr>
<td>Normative Mean</td>
<td>14.7</td>
</tr>
<tr>
<td>P-value</td>
<td>= 0.02</td>
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</tbody>
</table>

### Mindfulness Score (FMI)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
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</thead>
<tbody>
<tr>
<td>MBM Facilitators</td>
<td>41.9 ± 4.9</td>
</tr>
<tr>
<td>Normative Mean</td>
<td>34.5</td>
</tr>
<tr>
<td>P-value</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

**Correlation between the FMI and PSS scores**

\((-0.461, \ P<0.01)\)
# Mind-Body Medicine Facilitator Survey

## Open-ended Items

<table>
<thead>
<tr>
<th></th>
<th>Please describe how being a mind body medicine facilitator has impacted your <strong>professional life</strong>.</th>
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<tbody>
<tr>
<td>2</td>
<td>In what ways, if any, has being a MBM facilitator affected how you interact with <strong>other faculty members</strong>?</td>
</tr>
<tr>
<td>3</td>
<td>In what ways, if any, has being a MBM facilitator affected how you interact with <strong>the students in your group</strong>?</td>
</tr>
<tr>
<td>4</td>
<td>In what ways, if any, has being a MBM facilitator affected how you interact with <strong>other students</strong> (i.e., students not in your MBM group)?</td>
</tr>
<tr>
<td>5</td>
<td>In what ways, if any, has being a MBM facilitator affected how you see <strong>yourself as a faculty member</strong> in an academic medical center?</td>
</tr>
<tr>
<td>6</td>
<td>Please describe how being a mind body medicine facilitator has impacted your <strong>personal life</strong>.</td>
</tr>
</tbody>
</table>
Analysis of Facilitator Responses to Six Open-ended Items

Three central themes

1) Overall Professional Identity
   - Communication
   - Connections with Community
   - Empathy and Active Listening
   - Self-confidence

2) Self-care

3) Mindful Awareness

Talisman et al  *Acad Med* 90:780-784 June 2015
Theme 1: Professional Identity

It has deepened my personal and professional identity.

My professional identity has expanded and has made me feel more true to myself.
1a – Communication

In a way by being part of [an MBM] group, it has facilitated more open communication.

I speak more openly about mindfulness and mindfulness practices as ways to better our campus community.

I have experienced better communication with my colleagues, more empathy for their challenges, and our working relationships have therefore been improved.
1b – Connections and Community

I feel like the work that I do as a mind body medicine facilitator is the most important work that I do on campus. It has made more people connect with me about harmony and balance... My professional identity has expanded and has made me more true to myself.

I fear rejection much less and have a strong sense that my connections with colleagues are meaningful.

There is a deeper connection, a shared sense of understanding and history.
Being a mind-body medicine facilitator has been a gift... to learn from them has been a joy. I have improved my own listening skills... which has increased my openness, empathy, and understanding with my colleague

[I have] more sense of empathy [for my students].

[Being an MBM facilitator with the group of students has] increased empathy and feelings of connectivity.
This work has created more space for me – both personally and professionally – to grow and expand. I am more confident in my identity.

I am much more confident about inviting students to explore what is real about their lives, even if it might be painful.

I feel that I have more confidence speaking to others in our institution about this work.
Theme 2: Self-care

[Being an MBM facilitator in an academic medical center means] participating in a very important channel of self-care and patient care.

[In my professional life,] more connections around self-care... [and] more mindful patient care practices [are] perceived.

"[Being a mind body facilitator] has helped me to deal with stress better, [and] be more compassionate with others and with myself..."
Theme 3: Mindful Awareness

Being a mind body medicine facilitator has increased my own mindful awareness of myself as a professional.

It has allowed me to connect better with these students, creating a different type of relationship. They are more willing to come to me with difficulties and look to me as a resource and ally rather than an administrator.
Conclusions

- The findings of the present study suggest that participation as a facilitator in a MBM program has tangible positive outcomes for the professional identity of facilitators through:
  - Improved communication
  - Stronger connections
  - Enhanced empathy
  - Greater self-confidence and self-care

- The significant impact of MBM facilitation to reduce perceived stress and enhance mindful awareness provides a strong rationale for its inclusion in the training of physicians and other health professionals.
SAVE THE DATE
for this unique and timely education forum!

CENTILE Conference
International Conference to Promote Resilience, Empathy and Well-Being in Health Care Professions

WASHINGTON DC | USA | OCTOBER 18-21, 2015
CENTILE: Center for Innovation & Leadership in Education | Georgetown University Hotel & Conference Center

Co-Hosted by
GEORGETOWN UNIVERSITY
Georgetown University Medical Center
MedStar Health

CENTILEConference.org / CENTILE@ConferenceSolutionsInc.com
**Important Dates**

- **April 01, 2015**
  Registration and Call for Submissions Opens

- **May 22, 2015**
  Call for Submissions Deadline

- **July 17, 2015**
  Session Proposal and Abstract Disposition Notifications Sent

- **July 31, 2015**
  Presenter and Early Registration Rate Deadline

- **September 18, 2015**
  Group Hotel Reservation and Standard Registration Rate and Cancellation Deadline

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**The goal of the conference** is to bring together educators, researchers, practitioners, faculty development leaders, and academic policy makers to present and discuss the best practices and strategies to promote resilience, empathy and well-being, self-awareness and reflection, and to manage stress, reduce burnout and foster professional identity formation in students, residents and fellows, faculty and practitioners across the health professions. The conference will have plenary sessions, symposia, oral and poster presentations, and a number of interactive sessions including experiential and workshop sessions. We invite submissions that address various aspects of the above themes, such as the theoretical basis (definitions or models), underlying mechanisms (physiological, psychological, neuroscientific), and/or interventions (mindfulness, reflection, appreciative inquiry, self-care, spirituality, procedure-based, nutrition, or pharmaceutical) at the individual or institutional level.

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**Co-Sponsored By**

- [Maryland University of Integrative Health](#)
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[CENTILEConference.org](http://CENTILEConference.org) / [CENTILE@ConferenceSolutionsInc.com](mailto:CENTILE@ConferenceSolutionsInc.com)
Lessons Learned

- Mind-Body Medicine reflects the physiologic interface between mind and body and can be used as “physiology of de-stress”
- Faculty stress and burnout is a serious issue and is preceded with cynicism and the decline of empathy in medical students
- Approaches that can modulate stress and reverse these trends include:
  - Mindful practice
  - Enhancing self-awareness and self-care
  - Finding meaning in work
- These elements must be actively fostered at our academic health centers both in the curriculum and in the culture