Integrating Wellness & Nutrition: Lessons from University of Cincinnati

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1. Briefly review the crisis of chronic disease and minimal attention to lifestyle education in medical schools and healthcare provider burnout as background
2. Highlight 2 programs at UC that constitute a preventive and educational approach to fostering well-being
3. Provide overview of first program: Turner Farm Student Wellness retreats
4. Provide overview of second program: Mind-Body course, modeled after Georgetown University
5. Present information on development, outcomes, and sustainability plans for both programs as models

Objectives

Caveats

Academic Health Center

One Story
THE PROBLEM

Crisis of chronic disease: physical and mental disorders.

75% of chronic diseases are influenced by our behaviors / lifestyle.

PREVENTABLE

Heart Disease
Cancer
Obesity

600,000 die year
#1 cause of death in U.S.
Reversible with diet

1 in 3 cancer cases are preventable with Lifestyle changes

7 in 10 overweight
33% obese in Cincinnati
Lifestyle changes

CHALLENGE

prescribe lifestyle changes

PROBLEM

not taught in medical schools

Integrative Medicine Education

• NEW: Lifestyle Medicine and Wellness Curriculum Task Force

• Mindfulness Programs
  • Mind-Body Course

• Integrative Medicine Student Interest Group

• 4th Year Complementary Integrative Medicine Elective

• Interprofessional Initiatives across Academic Health Center
  • Turner Farm Student Retreats

Nutrition (Mis)education in US Medical Schools

How Much Do Doctors Learn About Nutrition?

By Stacey Collins, Contributor | Dec. 7, 2016, at 9:19 a.m.

In recent years, it has become increasingly clear that diet plays a starring role in preventing and treating certain chronic diseases. And physicians are often on the frontlines of counseling patients about how their diets and other lifestyle habits can affect their health and weight—a reality that has gained added importance given the obesity epidemic. And yet, it turns out that only 26 percent of U.S. medical students and even fewer medical students recommend 25 hours of nutrition education, according to a 2015 report in the Journal of Biomedical Education.

[See: The 10 Best Diets for Healthy Eating]

On average, U.S. medical schools offer only 15 1/2 hours of nutrition education across four years of medical school, according to a 2015 report in Academic Medicine. In a 2016 study, researchers at Case Western Reserve University examined data from 25 family medicine, internal medicine and OB-GYN medical residency programs throughout Ohio. What they found is that these programs averaged 2.8 hours of instruction on nutrition, nutrition and physical activity counseling, and only 42 percent of them taught the residents techniques for how to perform health behavior counseling.
Established June 2014

5th Annual Sanghvi Lecture
Nutrition and Mindfulness in an Era of Global Obesity and Diabetes

Program #1

Turner Farm Student Wellness Retreats

Program #1: Background

- To transform Disease Care to Wellness Care, need to educate health providers
- Transformation starts with education of students - traditional curriculum does not emphasize lifestyle modification
- Inter-professional learning grows into inter-professional team-based care
- Turner Farm's Teaching Kitchen as platform

Turner Farm’s Mission

Turner Farm operations promote connections between people of all ages and the land that feeds them, in body, mind and spirit.

Through education and example, we nurture understanding of the rhythms of nature, and our place in the natural world, fostering recognition of personal responsibility for stewardship of the land, ourselves and development of a nurturing community.

www.turnerfarm.org
Student Wellness Retreats

- Seventy-five students have participated in five wellness retreats
- 6-hour Saturday retreats
- Students from: Colleges of Medicine, Nursing, Allied Health, Pharmacy and Health Promotion
- Sign-up via email - fills within an hour
- Cost to student: $10
- Philanthropy off-sets cost

Retreat Schedule

9:30 - 10:00  Arrival/Refreshments
10:00 - 10:15  Welcome and Introduction to Turner Farm
10:15 - 10:30  Introduction to UC Center for Integrative Health and Wellness and the Teaching Kitchen Collaborative
10:30 - 10:45  Opening meditation
10:45 - 11:30  Foundations of Disease, Nutrition and Lifestyle didactics
11:30 - 11:45  Q&A
11:45 - 12:30  Break & Walking Tour of Turner Farm
12:30 - 2:30  Chef and students prepare healthy meals while discussing fundamentals of healthy eating; hands-on teaching kitchen experiential/tasting prepared dishes
2:30 - 2:45  Mindful Eating Experiential
2:45 - 3:15  Group Reflection, Discussion, Wrap-up
Retreat Evaluation

- **Presentations**
  - Quality - 95% rated “excellent”
  - Usefulness - 85% reported it would be useful
  - Length - 82% said “just right”

- **Experience**
  - Inter-professional exposure - 89% agreed with retreat being inter-professional
  - Enjoyment - 100% would recommend to another student
  - Environment - 100% reported the space to be excellent

What do you think you will change as a result of this experience?

- **Opportunities for Professional Change:**
  - Advocating for patient lifestyle changes with greater confidence
  - "Being more prepared to advocate for patients to get dietetic consults"
  - "Talk more about the importance of diet for many diseases, have ready information about resources like Turner Farm for patients"
  - "Encourage moving more and eating whole foods rather than eat less exercise more"

What do you think you will change as a result of this experience?

- **Opportunities for Professional Change:**
  - Seeking more evidence-based knowledge regarding integrative health
  - "Use evidence to show patients the benefits of lifestyle change"
  - "Use knowledge of phytochemicals in disease prevention, use current research in practice as things change"
  - "Dig more deeply and evaluate more critically the medical literature especially regarding integrative medicine"
What do you think you will change as a result of this experience?

- **Opportunities for Personal Change:**
  - Improving dietary habits
    - "Becoming more mindful with food, better understanding/listening to my body, spice up and provide variety to my life and meals"
    - "I'm inspired to make the small changes to my lifestyle and diet"
    - "I plan on incorporating a wider variety of textures/foods into each meal, I would have never expected mixing some of these foods together"

- **Opportunities for Personal Change:**
  - Incorporating mindfulness in self-care
    - "Be more mindful of returning to baseline"
    - "Plan on continuous personal growth especially in the mindfulness sphere"
    - "Use mindfulness to enjoy more of life"

Additional Comments?

- "I've thoroughly enjoyed every minute of this experience, I believe everyone should be given the opportunity to experience this”
- "Absolutely loved this, learning and having a chance to discuss with other healthcare students from other fields”
- "Loved the tour, learned a lot, would love to know how to get others involved”

Conclusion/Future Directions

- Student Wellness Retreats at Turner Farm were highly successful
  - Sought after – Student Affairs promotes
  - Development of personal wellness skills
  - Increasing interest in Integrative Health
- Greatest challenge: funding/faculty time to sustain
- Future longitudinal student teaching kitchen sessions for continued healthy behavior change and knowledge

Program #2

**Mind-Body Course**
1 in 2 physicians experience burnout

Not just MDs – all healthcare professionals


“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

1. Emotional Exhaustion
2. Depersonalization
3. Low Sense of Personal Accomplishment

Burnout
- Emotional
- Cognitive
- Behavioral

Drivers of Burnout

Nine Organizational Strategies to Promote Engagement and Reduce Burnout


Population Health
Patient Experience
Reduce Cost
Provider Satisfaction

The Triple Aim Quadruple

Mindfulness

“The awareness that emerges through paying attention, in a particular way, on purpose, in the present moment, and nonjudgmentally, to the unfolding of experience moment to moment.”

KwanShin, Fat Gasepung, Lung, 1960/2013

Courtesy of Colin West, MD, PhD
The most commonly studied interventions have involved mindfulness, stress management, and small group discussions, and the results suggest that these strategies can be effective approaches to reduce burnout domain scores.

**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 Exercises**
  - Appreciative Inquiry

**Conclusion 1**

Although the rates of chronic stress and burnout among physicians are rising, practicing **mindfulness** can reduce burnout and increase empathy.
What is the Problem?

Levels of stress and burnout alarmingly high amongst:

- Medical students and residents
- Nursing, pharmacy and allied health
- Law students
- Arts and music trainees

Implications of Stress and Burnout

Professional

- More likely to commit errors
- Negative impact on co-working relationships
- Decreased empathy
- More unprofessional behaviors

Personal

- Increased substance use
- Reduced quality of life

Balogun et al., 2002; Deyo et al., 2003; Clybye et al., 2010; Lloyd et al., 2002; Neumann et al., 2011; Shanafelt, 2003, 2012

Efficacy of Mind-Body Medicine

There is considerable scientific evidence that mind-body therapies are beneficial for many health problems:

- Headaches
- Insomnia
- Anxiety/Depressive Symptoms
- Stress
- Chronic low back pain
- Disease/Treatment-related symptoms


Mind-Body Skills Program

9-week course teaches students adaptive stress management skills using mind-body techniques to foster self-awareness and self-care

Over 300 students have participated at UC

Support for Program

Georgetown University School of Medicine

- Trained over 100 faculty as group leaders
- 80-100 first/second-years take course annually to learn stress reduction techniques to apply to daily life

After groups, students report:

- Greater connections and self-discovery
- Improved academic function
- Lower stress levels

MacLaughlin et al., 2011; Saunders et al., 2007

More Colleges are Focusing on Teaching Students in Mind-Body Medicine
### Mind Body Skills Facilitators

- College of Medicine
- College of Nursing
- College of Pharmacy
- Program Coordinator
- Data Manager

### College of Allied Health

- College of Conservatory of Music
- Interact for Health

### College of Law

- Hebrew Union College
- Academic Health Center

### Quantitative Measures

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<thead>
<tr>
<th>Measure</th>
<th>Scale/Tool</th>
<th># of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resiliency</td>
<td>2013-2017: Brief Resiliency Scale</td>
<td>6</td>
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<tr>
<td>Empathy</td>
<td>2013-2016: Interpersonal Reactivity Index (IRI)</td>
<td>21</td>
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<tr>
<td></td>
<td>2017: IRI - Perspective Taking and Empathic Concern subscales only</td>
<td>14</td>
</tr>
<tr>
<td>Stress</td>
<td>2013-2017: Perceived Stress Scale (PSS)</td>
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<tr>
<td>Positive and Negative Affect</td>
<td>2013-2017: Positive and Negative Affect Schedule (PANAS)</td>
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<tr>
<td>Mindfulness</td>
<td>2013-2016: Cognitive and Alternative Mindfulness Scale (CAMS-R)</td>
<td>12</td>
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<tr>
<td></td>
<td>2017: Five Facet Mindfulness Questionnaire (FFMQ)</td>
<td>15</td>
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<tr>
<td>Attraction to Group</td>
<td>2013-2016: Group Attitude Scale</td>
<td>20</td>
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<tr>
<td>Self-Reported Health</td>
<td>2016-2017: In general, would you say your health is...Excellent, Very Good, Good, Fair, or Poor?</td>
<td>1</td>
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<tr>
<td>Burnout</td>
<td>2017: Maslach Burnout Inventory emotional exhaustion and depersonalization</td>
<td>2</td>
</tr>
<tr>
<td>Depression, Anxiety, Fatigue, and Sleep Disturbance</td>
<td>2017: PROMIS® (Patient-Reported Outcomes Measurement Information System)</td>
<td>16</td>
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**Perceived Stress**

- Significant difference between groups over time ($p = .00$)
- Only the mind-body group reported a significant decrease in stress ($p = .00$)

![Perceived Stress Graph](image)

**Student Outcomes**

- Mindfulness
- Empathy
- Positive Affect
- Resilience
- Perceived Stress
- Negative Affect
Qualitative Measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Question</th>
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</thead>
<tbody>
<tr>
<td>Impact as person/student</td>
<td>How did this course impact you as a student and as a person, if at all?</td>
</tr>
<tr>
<td>Impact as physician/professional</td>
<td>Do you believe that this course will contribute to your professional work? If so, how?</td>
</tr>
<tr>
<td>Attitude toward medical school and/or profession/field</td>
<td>How has this course changed your attitude toward school, if at all?</td>
</tr>
<tr>
<td>What participant would tell others</td>
<td>If you could tell your Dean one thing about this experience what would it be?</td>
</tr>
<tr>
<td></td>
<td>If you could tell another student on thing about this experience what would it be?</td>
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</tbody>
</table>

Will this course contribute to your work as a physician/provider?

Yes - this course completely changed my way of thinking for the better. I hope to help some patients with what I’ve learned in this course, but regardless, I know I’ve improved myself, which will help me be a better physician.

Absolutely, I really hope to incorporate some of the things we learned into my practice later on down the line, but also, I think it will help maintain a healthy lifestyle in terms of balance, stress, and happiness as my life gets more complex and my free time becomes more and more limited.

Absolutely! I will be better equipped to take care of myself, which will translate into better care for patients. Additionally, I can now recommend certain techniques to patients as a form of complementary/alternative medicine.

I would highly recommend this course! The mindfulness techniques that I learned in this course have changed how I view myself and my coursework. I feel empowered to face the challenges that lie ahead.

Take this workshop. If you do one thing with your time take this workshop. You owe it to yourself and all the people you care about in your life. Some of things you learn in this course may not be your thing, but I guarantee you some of things you learn will be things that stick with you for the rest of your life. It will change the way you think about and approach stressful situations, I would be very surprised if at the end of it, you weren’t a happier, more laid back person.

Do it. Put all preconceived notions, skepticism, and worry aside and do it. You’ll see a side of medical students you may not have known was there. You’ll gain a sense of community and place that you won’t even know you needed. It is wonderful.

What would you tell other students?

I feel that my ability to cope in the moment has improved. For example, when constantly remunerating past painful experiences while trying to sleep, mindfulness meditation has helped me calm myself and clear my head a bit.

Yes, I used to get really stressed out before taking a practical or test and now I realize it’s not gone to help to stress/freak out and just study as much as I can and things will turn out okay.

Absolutely! While participating in this course, my academic curriculum was much more involved than the previous semester, often times seeming overwhelming. I found that all I had to do was accept my stress and visualize succeeding in my assignments and tasks. Once I was able to accomplish this (theoretically) simple task, I found I was more productive and content.

What would you tell your Dean?

Almost all students would likely benefit from at least one of the techniques taught during this class. Even if you are skeptical about mind-body medicine, taking this elective helps builds relationships and trust between students from different colleges which leads to more empathy and compassion. I believe that you will have happier, calmer, kinder students if more resources related to mind/body medicine are made available.

Keep this program going & expand it to more people! I know classmates unable to get a spot who would have greatly benefited from it.

This was a much needed experience and I would push to get this class awareness of mind-body meditation out to everyone in the College.

What do you feel confident in your ability to bounce back from difficulties and stressors (i.e. resiliency)?

Please continue to support the health of students. I think it’s clear that medical students are pretty anxious and stressed people, and that a number of the students suffer from depression. I feel that the support for them is not always there and have frequently worried about reaching out for fear of being labeled later in my career. These groups help encourage a healthier mindset and coping skills.

Elementary school had this course taught. The mindfulness taught. The mindfulness taught. This course made me feel more empathetic to those around me. Listening to other people share what they are going through day to day, the ups and downs, made me appreciate everyone has something they are going through, and it is important to be mindful of that. I also gained an appreciation of how helpful it can be for someone just to have an outlet to simply talk without fear of judgment.

If you could tell your Dean one thing about this experience what would it be?

If you could tell another student on thing about this experience what would it be?

...school has this way of making you doubt your abilities and has this attitude that if you aren’t perfect then you aren’t good enough. This course taught me to accept who I am and that I don’t need to be perfect. Once I stopped stressing over the need to make no mistakes and recognized that I might need help I saw my grades increase exponentially. I rarely was getting average and now I’m at the average or above it.

I feel better focused and better able to respond to stress. This has helped me to better deal with difficult scenarios while working with patients and studying.

How has this course helped you?

This course taught me to be calm and meditate and recognize the present moment. I can appreciate my body and appreciate what it can do. It has helped me to focus on my own breathing.

Please continue to support the health of students. I think it’s clear that medical students are pretty anxious and stressed people, and that a number of the students suffer from depression. I feel that the support for them is not always there and have frequently worried about reaching out for fear of being labeled later in my career. These groups help encourage a healthier mindset and coping skills.

How has this course changed your attitude toward school, if at all?

Yes, I used to get really stressed out before taking a practical or test and now I realize it’s not gone to help to stress/freak out and just study as much as I can and things will turn out okay.

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If you could tell another student on thing about this experience what would it be?

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Summary and Final Thoughts

- Wellness, through nutrition, movement, mindfulness and connectivity is critical to expose students to early on
- Experiential versus didactic-only
- What is Required?
  - Faculty modelling
  - Integration, rather than "one-offs"
- Resources
  "Tell me and I forget, teach me and I may remember, involve me and I learn"

THANK YOU!

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