

We Can't Afford to Burn Out: Lessons Learned and Preliminary Positive Results from a Multi-Institutional Online Wellbeing Curriculum for Medical Students and Residents

2021



Authors

Kaushal B. Nanavati, MD, Assistant Dean of Wellness, Director, Integrative Medicine and Survivorship, Upstate Cancer Center, Assistant Professor, Family Medicine, Upstate Medical University
John Taylor, Psy.D., Director, Wellness & Counseling, MSU College of Osteopathic Medicine
Chaya Prasad, MD, MBA, Western University of Health Sciences

Stuart W Grande, PhD, MPA, Medical Sociologist & Lecturer, University of Minnesota School of Public Health, and The Dartmouth Institute for Health Policy and Clinical Practice and Dept of Medical Education, Geisel School of Medicine, Dartmouth
Nicky Beaudoin, M.Ed., Research and Learning Director, CaseNetwork, Instructional Designer, Cornell University
Michael Witt, MD, MPH, Associate Designated Institutional Official and Emergency Medicine Faculty Member, Arnot Ogden Medical Center
Catherine Florio Pipas, MD, MPH, Professor, Community & Family Medicine, The Dartmouth Institute for Health Policy and Clinical Practice and Dept of Medical Education, Geisel School of Medicine, Dartmouth, Chief Wellness Officer, CaseNetwork

Challenge

Health professional wellbeing must be addressed early in medical training, at both the individual and organizational level (5,6,8). Rates of depression, burnout and suicide in medical students far exceed those in the general population and continue to rise throughout training and into practice (3). COVID-19 has additionally negatively affected the wellbeing of health professionals (4). Unmitigated, the impact persists into professional practice with higher risk of suboptimal patient care and its sequelae (2).

Objectives

Health professionals in training require the tools to practice self-care and to change their environment (9). However these tools are lacking, and more research is needed on how best to integrate these formats into medical training (9,7,8). The primary goal of this study was to assess the impact and effectiveness of CoreWellness™ curriculum (CW) online modules on learners. We also wished to assess differences in learning between medical students and residents.

Approach

CW, a standardized online wellbeing curriculum provides 17 self-directed modules (including resilience building, emotional intelligence, cognitive reframing, conflict resolution, mindfulness, narrative writing, leadership development) to over 20 institutions and 2,400 learners. CW also includes: 1) a Facilitators Guide to reinforce skills 2) interactive simulated encounters to observe colleagues' successes and struggles, and 3) institutional guides to help design and sustain a culture of wellbeing. Learners complete a pre- and post-survey for each module and are assigned 30-minute online modules followed by group discussions. Paired t-tests were calculated only on modules where over 30 learners completed both pre- and post-assessments.

Wellbeing Champions



John Taylor, Psy.D., Director, Wellness & Counseling, MSU College of Osteopathic Medicine



Chaya Prasad, MD, MBA, Western University of Health Sciences



Michael Witt, MD, MPH, Designated Institutional Official and Emergency Medicine Faculty Member, Arnot Ogden Medical Center



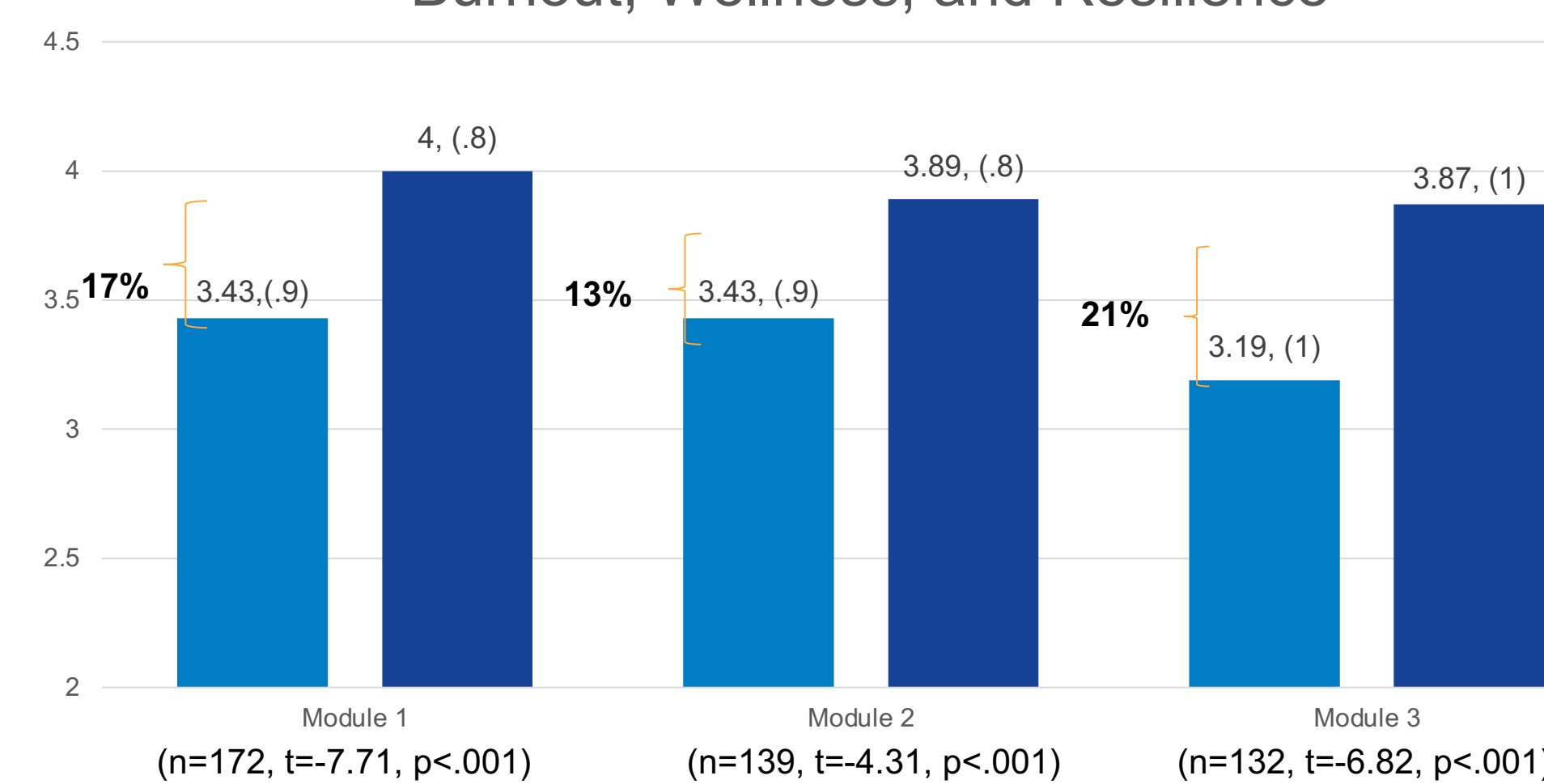
Kaushal B. Nanavati, MD, Assistant Dean of Wellness, Director, Integrative Medicine & Survivorship, Upstate Cancer Center, Assistant Professor, Family Medicine, Upstate Medical University

Results

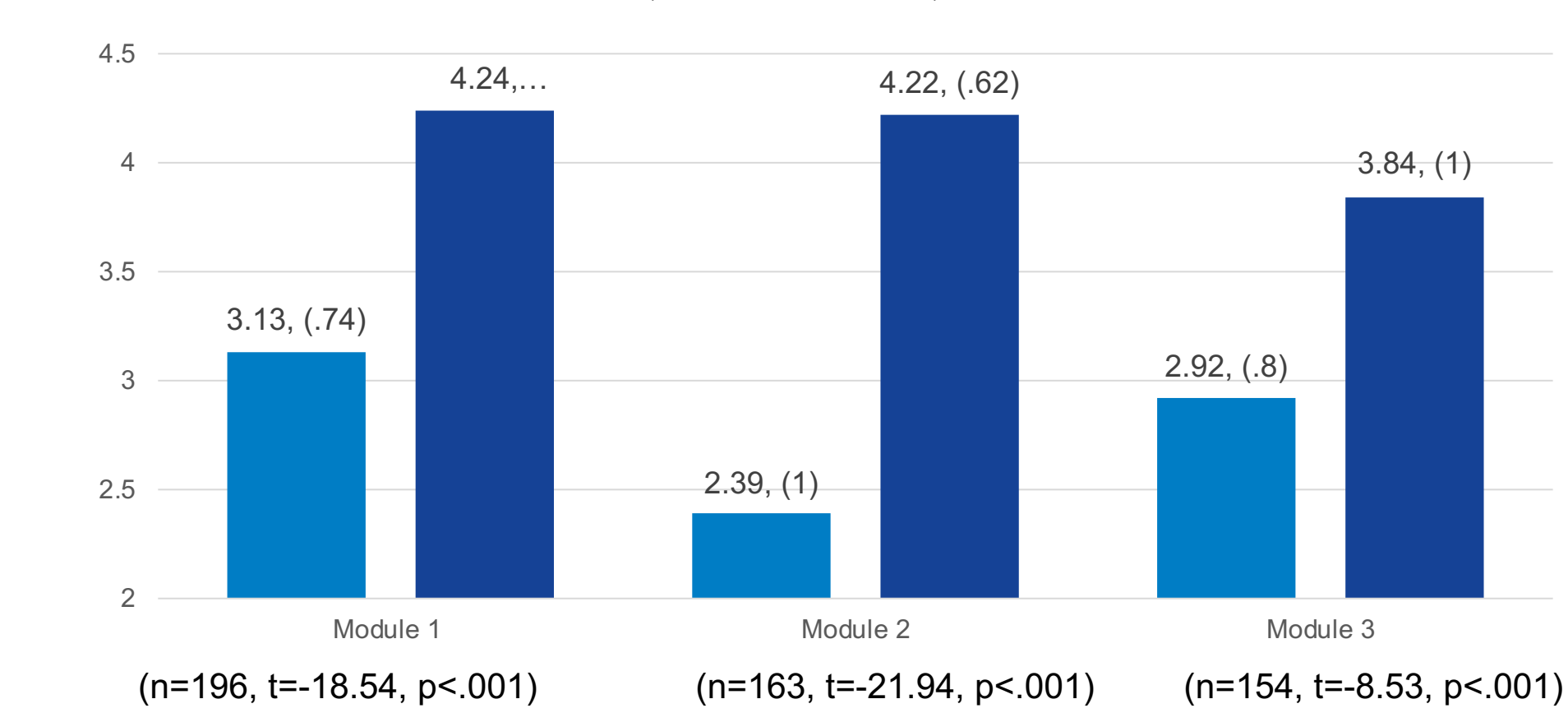
Scores for the first three modules addressing Burnout, Wellness and Resilience respectively increased significantly for both residents and medical students. Resident scores (mean, SD) increased 12% on Module 1 pre (3.43, .92) vs post (4.00, .84) ($t=-7.71, p<.001$), 9% on Module 2 pre (3.43, .92) vs post (3.89, .82) ($t=-4.31, p<.001$), and 13% on Module 3 pre (3.19, 1.05) vs post (3.87, .98) ($t=-6.82, p<.001$). Medical students had a larger increase with 22% on Module 1 pre (3.01, .69) vs post (4.13, .65) ($t=-10.35, p<.001$), 39% on Module 2 pre (2.29, 1.00) vs post (4.24, .56) ($t=-19.02, p<.001$), and 19% on Module 3 pre (2.98, .83) vs post (3.95, .87) ($t=-8.37, p<.001$).

173 residents completed all 17 modules. Averaging all modules, knowledge scores increased 10% pre (3.36, 1.01) vs post (3.89, .89) ($t=-17.82, p<.001$). Skills scores increased 8% pre (3.43, 1.16) vs post (3.83, 1.0) ($t=-10.66, p<.001$). Attitude scores increased 10% pre (3.28, 1.14) vs post (3.78, .99) ($t=-13.85, p<.001$).

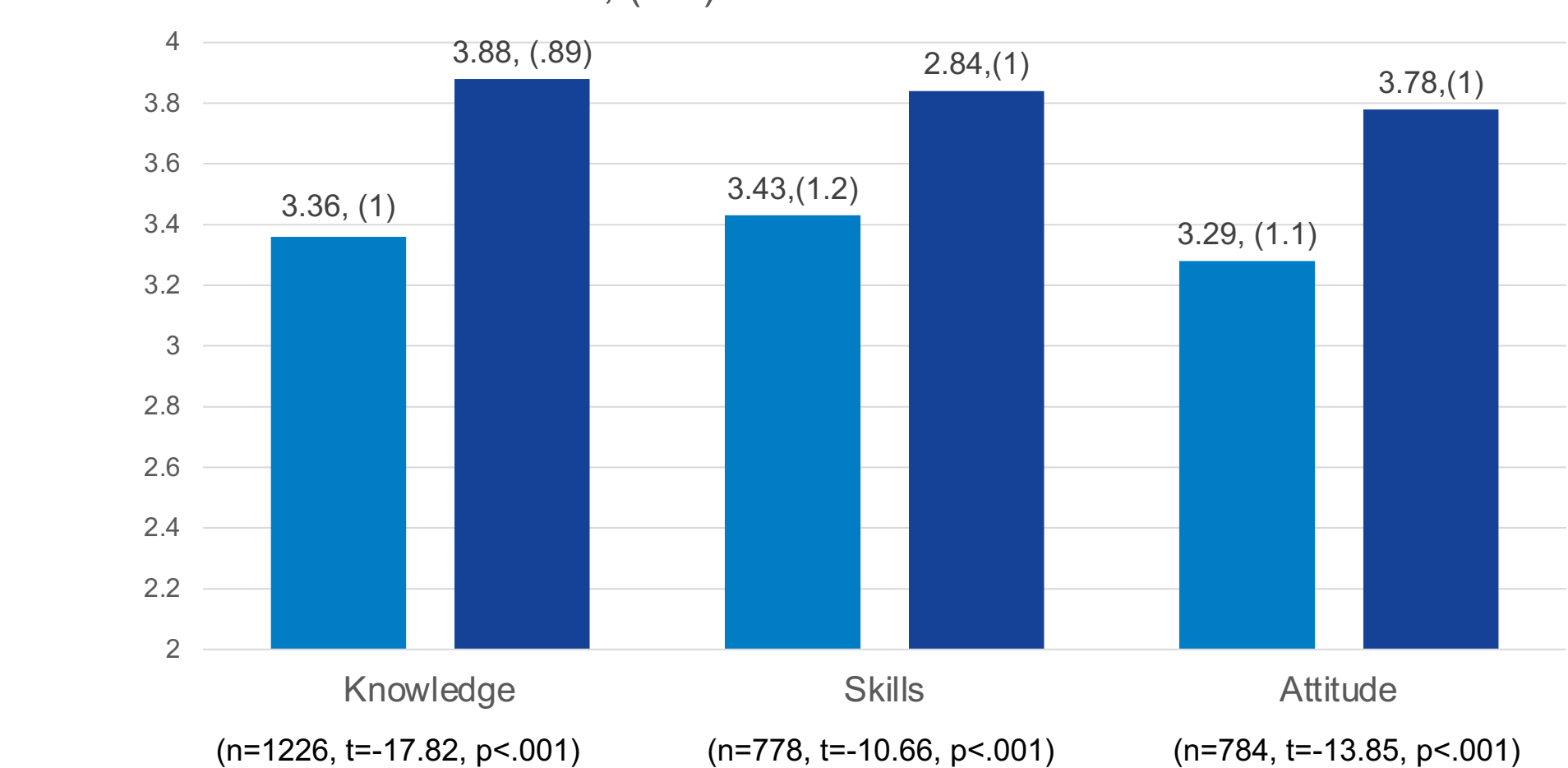
Mean, (SD) resident KNOWLEDGE scores by module: Burnout, Wellness, and Resilience



Mean, (SD) medical student KNOWLEDGE scores modules: Burnout, Wellness, and Resilience



Mean, (SD) resident scores across all modules



Models

	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
1st Year to Burnout	AMIR 510					
2nd Year to Burnout	AMIR 510					
3rd Year to Burnout	AMIR 510					
4th Year to Burnout	AMIR 510					
5th Year to Burnout	AMIR 510					
6th Year to Burnout	AMIR 510					
7th Year to Burnout	AMIR 510					
8th Year to Burnout	AMIR 510					
9th Year to Burnout	AMIR 510					
10th Year to Burnout	AMIR 510					
11th Year to Burnout	AMIR 510					
12th Year to Burnout	AMIR 510					
13th Year to Burnout	AMIR 510					
14th Year to Burnout	AMIR 510					
15th Year to Burnout	AMIR 510					
16th Year to Burnout	AMIR 510					
17th Year to Burnout	AMIR 510					

Comparisons with MSU-COM

Similarities	Differences
Groundwork	LM students targeted
Embedding into curriculum	Mandatory program
Update to senior leadership	Aggressive schedule
Regular monitoring	Peer tutoring
	Research
	Expansion to LMIG

Upstate of mind: our approach

Participants will review 3 modules per month

6 facilitated 1 hour sessions monthly

- 15 minute overview and review – Asst. Dean of Wellness
- 30 minute small group breakout with facilitated discussion
- 15 minute large group discussion – Asst. Dean of Wellness
- Reporting of small group pearls
- Action items for all to incorporate

Example of 12-month Curriculum Schedule

Month	Subject	Instructor/Facilitator
June 15	Introduction: Module 1	KMB
July 15, 24	Wellness & Mindfulness: Module 2	KMB
August 20-21	Wellness & Mindfulness: Module 2	KMB
September 15-18	Developing resilience: Module 3	KMB
October 15-18	Developing resilience: Module 4 & 7	KMB
November 15-20	Developing resilience: Module 6 & 14	KMB
December 15-18	Meditation	JA
January 15-18	Mindfulness: Module 12	FE
February 15-19	Material well-being for physicians: Planning for a safe future	DK
March 15-19	Module 13: Resilience	KMB
April 15-18	Resilient Leadership: Module 15	KMB
May 20-21	Module 16: Resilient Leadership	KMB

Discussion

Designing, implementing and assessing programs that improve wellbeing of health professionals is critical. Findings demonstrate learners who complete the CW modules significantly increase knowledge, skills, and attitudes across a broad range of evidence-based wellbeing strategies. Shared themes across institutions include: 1) An identified wellness champion in each program, 2) faculty facilitators benefit by completing tools personally, 3) protected time in the curriculum increases completion rates, and 4) diverse discussions build wellbeing communities. Following cohorts over time will allow further research to determine sustainability for both individual and system wellbeing.

References

- American Medical Association. Physician well-being: Developing a culture of wellness. 2019. <https://www.ama-assn.org/residents-students/resident-student-health/physician-well-being-developing-culture-wellness>. Accessed September 22, 2020.
- Deva CS, Loong D, Bonato S, Thanh NX, Jacobs P. How does burnout affect physician productivity? A systematic literature review. BMC Health Serv Res. 2014;14(1):325. doi:10.1186/1472-6983-14-325
- Dyrbye LN, West CP, Satele D, et al. Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. Acad Med. 2014;89(3):443-451. doi:10.1097/ACM.0000000000000134
- Gulati, G., and Kelly, B.D. Physician suicide and the COVID-19 pandemic. Occupational Medicine. 2020. <https://doi.org/10.1093/ocmed/kqaa104>. Accessed September 16, 2020.
- National Academy of Medicine Action Collaborative on Physician Well-Being and Resilience. 2020. <https://nam.edu/initiatives/clinician-resilience-and-well-being/>. Accessed September 22, 2020.
- Peckham C. Medscape National Physician Burnout & Depression Report, 2018. <https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression>. Accessed March 13, 2018.
- Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92(1):129-146. doi:10.1016/j.mayocp.2016.10.004
- Shanafelt T, Trockel M, Ripp J, Murphy ML, Sandborg C, Bohman B. Building a program on well-being: key design considerations to meet the unique needs of each organization. Acad Med. 2019;94(2):156-161. doi:10.1097/ACM.0000000000002415
- Wasson LT, Cusmano A, Meli L, et al. Association between learning environment interventions and medical student well-being: a systematic review. JAMA. 2016;316(21):2237-2252. doi:10.1001/jama.2016.17573