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Abstract book

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A team-based and organizational framework for fostering resilience and well-being in academic hospital medicine

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Learning objectives
1. Explore how dedication to provider wellbeing can complement a traditional academic and clinical mission within an academic hospital medicine division
2. Describe a holistic framework for tying resilience and employee-focus to healthcare business performance
3. Illustrate the impact of resilience practices at the team and organizational level on individual wellbeing in academic hospital medicine

Project objective/background
Half of all physicians are burned out, and burnout rates continue to rise. Numerous programs seek to address burnout through a focus on resilience and wellness behaviors of individuals. However, less is known about team-based and organizational strategies to foster resilience and reduce burnout among providers.

Methods
Using strategic planning methods, our academic hospital medicine group (approximately 55 physicians and advanced practice clinicians) engaged in a 3-year program to measure and foster resilience. From 2014 to 2017, we adjusted our group's vision statement to incorporate a commitment to being an outstanding place to work in academic hospital medicine. We deployed a comprehensive culture assessment to quantify faculty perceptions of meaningful work, workflow autonomy, professional development, logistical support, physical/mental health, access to fulfillment outside of work, collegiality, organizational learning, and safety culture. We used survey results to inform 13 team-based and organizational tactics to improve resilience (Table 1). We examined the impact of these tactics on workplace experience. No burnout or resilience interventions targeting individual faculty were initiated during this period.

Results
Baseline culture survey results demonstrated 78% of respondents felt a strong sense of peer collaboration, 30% felt a sense of psychological safety at work, and 45% felt burned out. Average annual turnover in the 5 years before the first survey was 13.2%. Despite occurring in a period of rapid growth in clinical encounters and pressure to increase gross revenue, culture survey results in 2017 demonstrated 91% of respondents felt a strong sense of peer collaboration, 60% felt a sense of psychological safety at work, and 35% felt burned out. In 2016, hospitalist-led clinical service lines achieved the highest quality and safety outcomes in our organization. Average annual turnover during the intervention period was 6.6%.

Conclusion
Significant improvements in burnout, workplace experience, and business performance can result from team-based and organizational interventions designed to improve experience of work among academic hospitalists, even in the absence of systematic efforts to improve individual-level resilience.

Table 1: Tactics to Improve Workplace Experience

Intervention	Year Implemented
Culture Survey and Report-Out	2014, 2015, 2016, 2017
Above and Beyond Awards	2014
Flash Mobs	2014
Impact Leadership Solutions Series	2015
HMG Incubator for User-Centered Design	2015
Leader Rounding	2015
Annual Review Revamp	2015
Expansion of Leadership Roles	2016
Faculty Coaching Program for New Hires	2016
Values-Based Clinical Schedule Redesign	2016
Revised CME Funds Policy	2016
Parent Leave Task Force	2016
Something Awesome	2017

An organizational wake-up call: Data connecting caregiver burn out, well-being and compassion

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Learning objectives
1. Discover how to leverage the power of partnership with HR department
2. Explore the relationship of burnout, engagement, and intention to leave
3. Utilize data examining burnout, compassion, "meaning/purpose" and supervisor/organizational promotion of compassion to champion culture change

Physician wellness and joy in medicine can occur only within the context of a healthy organizational culture. At Providence/St. Joseph's Health, compassion is at the core of our mission of creating a healthier environment of caring for both patients and caregivers. The foundation of our work is rooted in the belief that physicians, similarly to all caregivers, benefit from working as part of multidisciplinary teams, where compassion, joy and wellness in healthcare is fostered.

This presentation will share the results of a recently implemented process for measuring burnout and compassion across our health system. We will detail the data results, correlations and insights and also, share briefly the actions initiated as a result of the data.

Highlighted will be the essential partnership with our HR department that allowed measurement of burnout and compassion data from our caregivers (> 54,000 returned surveys). Included, will be the process used to engage HR in compassion/wellness work, the challenges of incorporating new questions into a system wide caregiver survey, and strategies for overcoming barriers.

To give participants tangible and usable information the following will be shared within the presentation:
1. Six specific burnout and compassion questions utilized within the survey, as well as burnout rates (by role, gender, time with organization)
2. Data documenting the complex relationship between burnout and sustainable employee engagement
3. Strong correlation of burnout with intention to leave the organization (and the results of a piloted "compassion curriculum" that reversed this intention)
4. Strong negative correlation between burnout and finding meaning and purpose in our work.
5. Importance of both supervisors and the organization being perceived as promoting/supporting compassion and its effect on burnout
6. Patient's perception of quality of their care related to the compassion of their caregivers
7. Examples of practices and actions that have been implemented to prevent and recover burned out caregivers

We will end the presentation with a look forward in our work, connecting caregiver burn out with quality, safety and high reliability. We will emphasis the importance of partnering within an organization to optimize results for caregivers and to deliver on the quadruple aim.

We have found this data to have a powerful focusing impact on both our organization's leadership and on caregivers as our organization journeys toward a healthier, more compassionate health care environment for all.

Depression and the toxic learning environment in graduate medical education

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Learning objectives
1. Compare the incidence of depression and depressive symptoms in residency with that reported in medical school
2. Explain the differing cultures across medical specialties that may account for differences in reports of belittlement and humiliation by residents
3. Discuss the relationship between reports of belittlement and humiliation with depressive symptoms in residency.

Project objective/background
The ACGME requires programs to promote resident well-being in supportive educational environments. Much of the current literature, however, continues to report high rates of depression and burnout in medical residents. Despite ongoing national and local efforts, many residency programs fail to prevent the belittlement and humiliation of their residents.

Methods
From January through May of 2016, residents and fellows were presented with an optional, anonymous survey including a 2-item depression screen (PHQ-2) and querying experiences of belittlement or humiliation.

Results
Over 12,000 residents and fellows responded: 25% were PGY1's, 24% PGY2's, 24% PGY3's, 15% PGY4-PGY7's, and 12% were fellows. Forty-six percent of respondents were female, 51% were male, and 3% declined to provide gender. Sixty-three percent of respondents graduated from an allopathic medical school, 27% graduated from medical school outside of the USA and Canada, and 10% graduated from an osteopathic medical school.

Using PHQ-2 scores of 3 or greater to represent a positive depression screen, 10.3% of respondents screened positive for depression. No significant gender differences were observed (Odds ratio of Females to Males: 1.11, 95% Confidence Interval of 0.97-1.26).

Twenty-seven percent of respondents reported at least one instance of being belittled or humiliated within two-weeks of completing the survey, with 4% reporting being belittled or humiliated on 7 or more days of the past two weeks. Female respondents were 30% more likely than males to report one or more belittlement or humiliation experience (OR 1.3, 95% CI 1.2-1.4).

Respondents reporting at least one belittlement or humiliation experience were 4.6 times more likely to screen positive for depression (OR 4.6, 95% CI 4.0-5.2). Male respondents reporting belittlement or humiliation were nearly 6 times more likely to screen positive for depression (OR 5.8, 95% CI 4.8-7.1), while female respondents were nearly 4 times more likely to screen positive for depression (OR 3.8, 95% CI 3.1-4.6).

Conclusion
High rates of resident depression and burnout as well as the experiences of belittlement and humiliation in medical residency have been consistently described in the literature. To date, no published work has statistically related the mental health of residents to the learning environment. In this report, the high association between resident mistreatment and depression suggests that decreasing the prevalence of resident mistreatment may have a positive impact on the mental health of residents. Promoting supportive educational environments at the programmatic and institutional levels would appear to serve the goal of further fostering resident well-being.

Medical student mental health: A longitudinal cross-sectional survey

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Learning objectives

1. Describe attitudes towards and experiences with mental health amongst medical students, and in particular, highlight similarities and differences across four stages of pre-clinical and clinical training.
2. Assess the extent to which specific factors contribute negatively to mental health in medical school and identify targeted opportunities for intervention by individual cohort.
3. Discuss importance of addressing mental health stigma, beginning with promoting awareness about shared experiences within the medical school community.

Project objective/background

To evaluate mental health experiences and attitudes across stages of medical school education, including changing trends over the course of training. Broader aims include promoting discussion and awareness of stigma, and identifying specific areas of intervention.

Methods

An anonymous cross-sectional survey was administered to four cohorts: first-year pre-clinical, second-year pre-clinical, first clinical year, and second clinical year students. The survey included validated mental health instruments (for anxiety, depression, burnout, mindfulness) and measures for stigma perception within the medical field, contribution of specific factors to mental health, and students' methods of self-care. Cohorts were also invited to optional discussions, where they explored aggregated cohort survey results, and shared personal experiences.

Results

61 students participated in a 2015 single-cohort pilot and 133 students completed the 2016 cross-cohort survey. Students reported experiences with anxiety (54%), depression (35%), and disordered eating (20%) during medical school. Across cohorts, most cited negative contributors to mental health (>80% reported) were lack of time, work/life imbalance, lack of sleep, and lack of exercise. Certain factors were cited as less negatively impactful in later stages of training (e.g. comparison of self to others decreased from 28% to 12.5%), whereas other factors became more negatively impactful (e.g. lack of exercise, identified as a self-care tool for over 80% of respondents). Subgroup analysis demonstrated significant trends, including: women cited "feelings of inadequacy" as a significant stressor more often than men (42% vs 25%); self-identified underrepresented minorities cited financial stressors more often (37% vs 7%), and more reported experiencing depression (50% vs 32%) and insomnia (60% vs 23%); more self-identified LGBTQ students reported experiencing anxiety (86% vs 54%) and depression (57% vs 34%). Regarding stigma, 68% of medical students believed that doctors or medical students with mental health histories are perceived as less competent (decreasing from 75% to 44% as students progress through training), while 79% reported disagreement with the sentiment that such individuals are less competent.

Conclusion
This study provides insight into underexplored topics such as specific exacerbating factors, perceptions of stigma amongst colleagues, and similarities and differences in attitudes across years of medical school training. We believe there is significant benefit to the dissemination of anonymized results of one's own cohort to promote discussion. In addition, longitudinal data collection provides an opportunity to both identify and evaluate targeted interventions, such as the promotion of physical wellness in clinical years or a focus on LGBTQ and underrepresented minority students.

Physician wellness measures are associated with unsolicited patient complaints: A marker for increased liability risk

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Learning objectives
1. Participants will be able to describe the relationship between physician wellness and unsolicited patient complaints, which are a marker of liability risk.
2. Participants will be able to cite the findings of this research as another line of evidence for potential organizational financial advantage (i.e., lower liability risk) of improving physician wellness.

Project objective
The objective of this study was to evaluate associations between unsolicited patient complaints and physician wellness measures including burnout, sleep-related impairment, and professional fulfillment.

Background
Physician wellness is an important factor in providing quality health care to patients. Patients are uniquely positioned to observe clinical care and clinicians' behavior. Poor clinician wellness is associated with lower patient satisfaction, increased self-reported medical errors, and higher mortality rates in patients. We hypothesize that physician wellness measures are associated with unsolicited patient complaints (UPCs), which are a marker of increased malpractice claims.

Methods
This analysis includes 438 physician survey respondents from the medical staff of Stanford Hospital and Stanford Children's Hospital. Burnout and professional fulfillment were assessed using scales developed for the 2013 Stanford Physician Wellness Survey. We assessed sleep related impairment using the PROMIS scale included in the 2013 survey. We included UPCs from the Vanderbilt Center for Patient and Professional Advocacy's Patient Advocacy Reporting System (PARS) from 2014, 2015 and 2016. UPCs include patients' perception of physicians' lack of respect, lack of availability, and ineffective communication. We used mixed effects models to account for the nested data structure of multiple PARS complaints across annual assessments for each physician.

Results
Across the three years, approximately 40% of our sample had no complaints; 30% had moderate numbers of UPCs (1-12); and 30% had high numbers of UPCs (13+).

Self-identified burnout was associated with 132% increased odds of being in the moderate or high categories of UPCs (OR = 2.32; 95% CI =1.49-3.61). Each one-point increase, on a 5-point scale, in emotional exhaustion, interpersonal disengagement, and sleep-related impairment was associated with a 54% (OR = 1.54; 95% CI = 1.10-2.15), 87% (OR = 1.87; 95% CI = 1.18-2.98), and 40% (OR = 1.40, 95% CI = 1.001-1.96) increased odds of being in the next higher UPC category respectively. Professional fulfillment was a protective factor— associated with fewer UPCs. Each one-point increase in professional

fulfillment was associated with a 42% decreased odds of being in the next higher UPC category (OR = 0.58, 95% CI = 0.41-0.84).

Conclusion
Physicians who have higher symptoms of burnout are at a higher risk of unsolicited patient complaints, which may lead to more malpractice claims. Physicians' professional fulfillment was associated with lower risk of unsolicited patient complaints, which may translate to decreased liability.

Prevalence of work-related musculoskeletal disorders among at-risk physicians: A systematic review and meta-analysis

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Learning objectives

1. Describe which physicians are at risk of work-related musculoskeletal disorders and why
2. Describe the prevalence of work-related musculoskeletal pain among at-risk physicians
3. Describe the prevalence of work-related musculoskeletal injuries among at-risk physicians
4. Describe the range of consequences of work-related musculoskeletal disorders among at-risk physicians
5. Describe the major trends in efforts to prevent work-related musculoskeletal disorders among at-risk physicians

Project objective

To estimate the prevalence of disabling work-related MSDs among at-risk physicians and to determine the scope of preventative efforts.

Background

Physicians in procedural specialties are at high risk for work-related musculoskeletal disorders (work-related MSDs). Although research has been conducted on burnout, sharps injuries, and other occupational hazards in medicine, little attention has been paid to the growing body of literature describing the work-related pain and injuries forcing these physicians to undergo surgery, reduce productivity, and, at times, lose their careers. This has been called "an impending epidemic" in the context of the looming workforce shortage, however prevalence estimates vary by study.

Methods

A systematic search of Medline, Embase, Web of Science, PubMed (NCBI), and two clinical trial registries was conducted without language restriction for studies reporting on the prevalence and prevention of work-related MSDs among at-risk physicians published before December 2016. "At-risk physicians" was defined as surgeons and medical interventionalists. Studies reporting on specific disorders or pain assessed with validated instruments were included. Study characteristics, disease prevalence for the neck, shoulder, back, and upper extremity, and measures of resulting disability were recorded. Study estimates were pooled using random-effects meta-analytic models. The main outcomes of interest were career prevalence of injuries and 12-month prevalence of pain.

Results

Pooled crude prevalence estimates of the most common work-related MSDs were: degenerative cervical spine disease 17% (457/2,406 physicians)[95% CI 12-25%], rotator cuff pathology 18% (300/1,513 physicians)[95% CI 13-25%], degenerative lumbar spine disease 19% (544/2,449 physicians)[95% CI 5-16%], and carpal tunnel syndrome 9% (256/2,449 physicians)[95% CI 5-16%]. From 1997 to 2015, the

prevalence of cervical and lumbar spine disease increased by 18.3% and 26.9%, respectively. Pooled prevalence estimates for pain ranged from 35-60% and differed by assessment instrument. Of those with a work-related MSD, 15% (391/2,704 physicians)[95% CI 10-21%], required a leave of absence, practice modification, or early retirement. Heterogeneity was considerable for all crude analyses (mean I^2=93.5%), but lower for sensitivity analyses (mean I^2=72.3%). Interventions focused on products and behaviors. Twelve of 14 at-risk specialties described a gross lack of awareness and an unmet need for ergonomics education.

Conclusion
Prevalence estimates of work-related MSDs among at-risk physicians appear to be high and increasing. Further research is needed to develop and validate a multidisciplinary community intervention aimed at prevention. A comprehensive approach aimed at physician well-being may efficiently address physical, mental, and emotional hazards of medicine.

Reaching the tipping point: Creating momentum for meaningful change

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Learning objectives
1. Describe how a core group of dedicated wellness supporters can effectively advocate for change.
2. Describe how the Utah Model for wellness champions can be adapted to other institutions.
3. Understand how to effectively create and harness momentum to create tipping points.

Project objective/background

The University of Utah School of Medicine Graduate Medical Education Committee created a wellness committee in the spring of 2015. This action resulted in a cascade of events that developed into a comprehensive wellness program with potential for broad influence. We outline several steps and opportunities (wide array of motivated committee members; collection and judicious use of data; willing leadership; and the use of networks for initiatives and communication) that have resulted in acceptance of our program and a "tipping point" where large scale change is possible. Our model involves a network of wellness champions that are now influencing change beyond Graduate Medical Education. We highlight two wellness initiatives to illustrate how our program is tailored to individual program needs and part of a larger system of wellness efforts.

Methods/approach

The GME wellness committee included a broad array of stakeholders including program directors, program coordinators, trainees, human resources representatives, psychologists, wellness providers, and chaplain services. The committee was tasked with assessing best practices, identifying current resources and gaps, and proposing a program that would leverage current resources and make proposals to address gaps.

Results (*to date*)
- 2 years of comprehensive survey data collection on resident and fellow burnout, depression, sleep impairment, perceived appreciation, peer support, and mindfulness
- Creation and hiring of a GME wellness program director and coordinator.
- A network of almost 50 "Wellness Champions" from 21 departments across the medical system working on wellness initiatives
- More accessible mental health treatment for GME
- Test anxiety assessment and coaching
- Gatekeeper Training (suicide prevention training) offered to programs
- Wellness Champions workshop and generation of 100 ideas for wellness
- Developing a Culture of Appreciation

We also highlight two groups of wellness champions and their initiatives to illustrate diverse approaches taken by different programs. One group from neurology created a death rounds to discuss the emotional difficulties of their work. This is contrasted with a group of champions from internal medicine who created appreciation and mindfulness offerings to improve resident wellness.

Conclusion
Contemplating changes to a system as cumbersome as an academic medical center can be daunting. We will demonstrate how an idea can be transformed through collaboration into a network that creates meaningful momentum.

The dose-response effect of positive rounding in health care work settings: Associations with health care worker burnout, burnout climate and work-life balance

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Learning objectives
1. Understand what Positive Rounding is, and distinguish it from Safety Leader Rounding
2. Understand the resilience constructs that correlate with exposure to Positive Rounding (Burnout, Burnout Climate, Work-life Balance)

Project objective/background
Does the deliberate celebration of successes and recognition of individuals that excel in patient-centered care demonstrably link to the well-being of healthcare workers? Senior leader rounding, in which leaders visit work settings to surface and resolve patient safety related deficits, has been associated with better safety culture and lower rates of burnout (Sexton et al., 2014). Positive rounding, which is a new variant of senior leader rounding, involves leaders specifically acknowledging what is going well in units and recognizing workers who go above and beyond. To date, there is a paucity of evidence assessing associations between positive rounding and worker well-being. In the current study we evaluated the associations between health care worker well-being and the extent to which they had been exposed to positive rounding.

Methods
A healthcare-system-wide survey of 10,496 healthcare workers (78% response rate) included measures of burnout (emotional exhaustion), burnout climate, and work-life balance, as well items on whether or not respondents experienced positive or regular rounding.

Results
Workers who reported experiencing positive rounding (62%) reported significantly lower rates of personal burnout $t(8,778) = -25.11$, $p < .001$, burnout climate $t(8,765) = -24.14$, $p < .001$, and higher rates of work-life balance $t(8,647) = 17.87$, $p < .001$, compared to workers who did not. Multiple regression analyses showed that both regular senior leader safety rounding and positive rounding uniquely predict lower burnout (regular$: b = -.15$, $t(5334) = 11.00$, $p < .001$; positive: $b = -.24$, $t(5334) = 17.31$, $p < .001$), and burnout climate (regular: $b = -.15$, $t(5329) = 11.21$, $p < .001$; positive $b = -.25$, $t(5329) = 17.40$, $p < .001$), and greater work-life balance (regular: $b = .14$, $t(5356) = 9.73$, $p < .001$; positive $b = .175$ $t(5356) = 12.05$, $p < .001$).

Conclusion
Positive rounding is associated with higher healthcare worker well-being outcomes and uniquely contributes to these outcomes, compared to regular rounding. Positive rounding was initiated as a method for enhancing employee engagement, but these findings suggest that positive rounding merits a closer look as a potential intervention to reduce burnout and improve the well-being of healthcare workers.

Toward a culture of wellness: Addressing spiritual and moral distress

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Learning objectives
1. Recognize spiritual distress and moral distress in physicians.
2. Discuss emotional, cognitive and behavioral impacts of unaddressed spiritual and moral distress and how they contribute to burnout and depression.
3. Discuss why addressing spiritual and moral distress is essential for developing a culture of wellness.

Project objective/background
After a patient dies in the OR, a highly respected surgeon locks himself in a room, won't come out, and won't talk to nurses or physicians. A medical student known for her compassion and integrity, reveals distressing thoughts of not even caring about her patients and wondering what is happening to her and why. Conscientious physicians and nurses are distressed every time a patient is placed on a respirator that they suspect the patient doesn't want and they feel won't be effective. This perspective highlights the problem of spiritual and moral distress in healthcare; explores its nature and impact on physicians, healthcare teams, patients and organizations; and discusses how addressing spiritual and moral distress contributes to meaning and joy and is essential for building a culture of wellness.

Methods
To distinguish spiritual and moral distress and their consequences, we will cite the literature and draw from 27 years of experience as chaplains at an academic medical center working with physicians, medical students, and nurses at the bedside, on Reflection Rounds, and in Quality Improvement. We will incorporate reflections from each of our prior careers, as an emergency physician, and as a criminal attorney. Next we will illustrate examples from spiritual care, medical education, and an end-of-life-care QI project that address spiritual and moral distress. Finally, we will brainstorm with participants how understandings of spiritual and moral distress can be integrated into developing a culture of wellness.

Results
As a result, participants will understand how:
- Both spiritual and moral distress in healthcare are unavoidable, pervasive and typically unseen.
- Spiritual distress occurs when individuals are unable to find meaning, hope, love, peace, comfort, strength and connection in life, or when conflict occurs between their beliefs and what is happening.
- Moral distress occurs when one is unable to act according to one's values.
- Reactions to these conditions can include meaninglessness, hopelessness, vulnerability, and loneliness, as well as self-criticism, guilt, shame, embarrassment, lowered self-esteem, or anger.
- This leads to disillusionment, cynicism, and disengagement from one's purpose and passion and can contribute to burnout and depression.
- Strategies for producing spiritual and moral resilience and shifting from distress to meaning and joy may be drawn from spiritual care, ethics, psychology and education.

Conclusions
Developing a culture of wellness must recognize and address spiritual and moral distress, predisposing conditions and consequences, and develop approaches that produce spiritual and moral resilience and allow for meaning and joy.

A residency-driven physician wellness program creates success in resiliency building

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Learning objectives
1. Identify unique insights gained from the delivery of an innovative resiliency curriculum in physicians in training.
2. Understand the benefits reported by resident physicians from undergoing a physician wellness program centered on SKY Breathing Meditation as high yield, experiential and sustainable for building resiliency.
3. Identify the applicability of a physician wellness program teaching innovative self-care techniques such as SKY breath meditation during residency to practicing physicians.

Project objective/background
Physician burnout and its negative consequences is recognized as a national epidemic from numerous studies. There is need for both systemic and individual based solutions to address physician wellbeing. Assessing the efficacy of programs imparting personal resiliency training is still being assessed nationally. We aim to assess the success of a specific wellness curriculum taught during residency involving an innovative practice termed SKY that is yet to be studied in physicians for enhancing resiliency.

Methods
Residents at Michigan State University learned a modified "Advanced Physician Wellness" curriculum over 3 consecutive days each consisting of 4 hour sessions. The program was taught twice a year from 2010-2016 by trained physician instructors to internal medicine residents. The curriculum interventions focused around 3 objectives: learning a specific set of breathing techniques along with an advanced breath based practice named SKY, b. gaining cognitive tools to handle stress, c. effortlessly increasing self-awareness. Anonymous evaluations were filled out voluntarily after the program. The evaluation forms used a combination of quantitative and qualitative questions in order to assess a. the perceived value of the curriculum for the time allotted, b. the receptivity of the residents, c. the benefits of the program.

Results
A total of 61 residents completed the curriculum. There were no drop outs. An average score of 8.6/10 was given for how satisfied residents were on time spent during the program. 93% of residents stated they would recommend the program to other physicians. 97% of residents felt the curriculum should be a part of a formal medical curriculum (83% felt such a program should be mandatory). 93% of residents reported the program would help them be "better" in delivering patient care. Self-reported benefits through open-ended questioning included enhanced ability to cope with stress, a changed outlook on personal wellbeing, increased ability to handle negative emotions, increased optimism, greater self-reflection and awareness, greater understanding of meditation, and increased connectedness to their peers.

Conclusion
Extrapolated qualitative results of the Advanced Physician Wellness Program involving the use of SKY Breathing Mediation suggest it to be an extremely high yield intervention promoting several key life-skills necessary in building personal resiliency. Follow up data from open-ended questioning indicated multiple benefits were experienced per participant. A standardized pre and post survey using a modified

Maslach burnout inventory scale is planned. Next steps in our study include assessing how this program can affect long-term, future wellness of a practicing physician.

Clinician perception of team support, burnout and "doability" of primary care

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Learning objective
1.   At the conclusion of the presentation, participants will be able to identify the team-based role with greatest impact on clinician experience in this study.

Project objective/background
Team-based care has been proposed as a means to improve clinician experience and alleviate burnout. We explored, in a county based health system with a defined model of team-based care, the association between enhanced roles for medical assistants, registered nurses, and behavioral health providers on burnout and the perception that primary care is becoming a more doable job.

Methods
We conducted a cross-sectional survey of 236 clinicians in 15 county-run primary care clinics in November 2016. The outcome measures were the emotional exhaustion and cynicism subscales of the Maslach Burnout Inventory, the PULSE "likelihood to recommend your clinic as a place to work" item, and a single item measuring agreement that "primary care is a more doable job this year compared to last year." Clinicians reported their perception of the capability of three groups of staff partners to take on more robust roles in team based care: a) medical assistants correctly measuring blood pressure, b) registered nurses providing chronic disease education and medication titration, and c) behavioral health providers providing access to and communication about services. A composite "team role" score was created from these three items. We conducted linear regression with clustering by clinic, controlling for years in the system and number of half days, to explore the association of team roles with the outcomes.

Results
Nearly half (48%) reported high emotional exhaustion and 32% reported high cynicism. A third (35%) were highly likely to recommend their clinic as a place to work, and 38% reported that primary care was a more doable job this year compared to last year. When examined in regression models, higher perceived capabilities of the care team were associated with greater lower exhaustion (β=-.70, p=.03) and cynicism (β=-.90, p=.001), a higher likelihood to recommend the clinic as a place to work (β=.49, p=.002), and greater doability of primary care (β=.53, p<.001).

Conclusion
Developing robust team based care roles for team members such as medical assistants, registered nurses, and behavioral health in primary care may have benefits not only for patients, but also for clinicians.

Evaluating the impact of clinical librarians on inpatient rounds

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Learning objectives
1. Explain the role of a clinical librarian (CL) on inpatient rounds, care costs, and learner EBM ability
2. State the demonstrated impact of CLs on inpatient rounds
3. Evaluate the possible role for a CL in contributing to a multidisciplinary team and reducing physician workload related to literature searches

Project objective/background
Clinical librarians (CLs) have various roles in the healthcare system. In some academic settings, they attend inpatient rounds where their expertise may save physicians time and reduce physician workload through literature searches and answers to clinical questions.

This study aimed to determine the effect of CLs on inpatient teams' clinical questioning and learner skills in asking evidence-based medicine (EBM) questions.

Methods
Clinical questioning was measured over 50 days of inpatient rounds by direct observation in which the CL was present for 25 days and absent for 25 days. Surveys were distributed at the end of participants' rotations.

Results
Presence of the CL on rounds was associated with an increased number of questions asked from a median of 3 questions without the CL to a median of 4.5 questions with the CL ($p<0.01$), and in number of questions answered from a median of 2 to a median of 3 questions ($p<0.01$). Presence of the CL on rounds was also associated with increased time spent asking questions from a mean of 0.52 minutes without the CL, to a mean of 1.39 minutes with the CL ($p<0.01$) and in time spent answering questions from a mean of 1.39 minutes without the CL, to a mean of 2.18 minutes with the CL ($p=0.02$). Time spent rounding per patient was not significantly different with or without the CL.

Eighty-eight percent (46 of 51) of study participants completed post-rotation surveys. Participants were significantly more likely to report increased ability to ask and answer questions at the end of their rotations ($p<0.01$). Thirty-three of 40 responses (83%) indicated the CL added to their learning. Participants commented that having the CL was "so helpful," allowing teams to be "more confident," "answer questions in real time," and "get answers faster and get high quality data." Another thanked the CL for "all the great lit searches," and others appreciated the "research support," the "great initiative," and instruction on "how to keep up to date."

Conclusion
Presence of a CL on inpatient rounds was objectively associated with more clinical questioning and subjectively perceived as improving participants' EBM skills and helping participants receive answers

quickly. In conclusion, CLs on inpatient rounds may contribute to a multidisciplinary team in which CLs provide expertise to increase efficiency and quality of care, teach EBM skills, and reduce physician workload such that physicians can practice up to date, evidenced-based medicine in a more meaningful and satisfying manner.

Fostering physician-wellness: The role of operational tactics and efficiency

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Learning objectives

1. Learn how tactics for increasing efficiency improve practice structure, care delivery and the well-being of providers.
2. Analyze the operational strategies two different practices used to gain efficiencies in workflow that resulted in improved physician satisfaction.
3. Evaluate the significance of context and payment and their corresponding impact on efficiency and practice longevity.

Project objective/background

Pressing demands on primary care and healthcare systems call for innovative approaches to teamwork, culture, financing, and technology such that care delivery can better cultivate patient and physician satisfaction. While primary care leaders and practices have been chronicled in many venues, readers are limited to learning *what* these leaders or practices are doing, not *how*. The Harvard Medical School Center for Primary Care seeks to fill this critical knowledge gap by profiling exemplar practices, systems, and models in order to address *how* they operate and defy systemic challenges in order to deliver high-performing primary care.

Methods

In order to understand *how* practices are delivering primary care, we developed an original research program featuring mixed methods case studies. These case studies aim to disseminate knowledge about best practices in primary care and highlight innovative, high-performing care delivery. Case studies allow us to evaluate the operational and clinical structures of systems, and how those structures alleviate or drive contemporary challenges including physician burnout, high cost, and poor patient and physician experience.

Results

While physician burnout is a national phenomenon, it is especially pervasive in primary care. However, two of our case organizations, Martin's Point Healthcare – Bangor (MPHC) and the Southern California Permanente Medical Group (SCPMG), achieved joy in practice and are renowned for their provider satisfaction.

While these organizations are different with regards to clinical model, geography, and patient population, we observed that both not only have high physician satisfaction, but also emphasize efficiency. Both assert that satisfaction can be fostered through key operational tactics: streamlining EMR and IT platforms, workflow redesign, and designing roles to practice at top of licensure.

One commonality was innovative approaches to IT. EMR and IT platforms are traditionally used for billing and data storage. MPHC and SCPMG, however, did not simply streamline their IT for its traditional purposes, but rather altered the platforms such that they were essential tools in clinical workflow redesign.

Conclusion
From MPHC and SCPMG's use of these operational tactics we deduced that efficiency is important from operational and joy perspectives. Although these tactics contributed to satisfaction, MPHC closed shortly after the case was written while SCPMG continues to thrive. MPHC suffered from workforce shortages, financial challenges, and a strained relationship with MPHC system headquarters. These divergent outcomes underscore the notion that context and payment are also important, and the interplay between the two must be considered and mitigated when developing sustainable organizational processes.

How has EHR implementation affected the patient-practitioner relationship in the United States and abroad?

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Learning objectives
1. Identify three features of electronic health record (EHR) design in the United States that have made implementation more challenging than in other industrialized nations
2. Describe two innovative care delivery models that can decrease the burden of EHR documentation
3. Describe three examples of how technology can be used to enhance the connection between patients and practitioners.

Project objective/background
The current national discussion about physician health suggests that EHR documentation and cognitive overload have contributed significantly to physicians feeling less connected to their patients and more dissatisfied with their work. **How <u>has</u> the electronic health record affected the relationship between patients and practitioners, and how might this question be answered?** This presentation will explore how a variety of stakeholders propose to keep the patient-practitioner relationship at the center of clinical care in an ideal EHR world, in our current clinical world, and as we move into the future.

Methods
In March 2017, 150 patients, practitioners, educators, technology designers and vendors, healthcare stakeholders, and government officials from the United States and six other nations convened for the first international conference on this important topic. This presentation will analyze and summarize the scientific research, professional commentaries, and personal stories from the meeting, comparing and contrasting the United States experience with that of other industrialized nations. The presentation will suggest areas for future research and next steps.

Results
- All stakeholders profit from listening to and understanding one another's perspectives.
- The experience of other nations farther along in EHR implementation suggests that early years are painful because of resistance to change, learning new systems, and infrastructure challenges.
- Many commonly-used United States EHRs were not designed by physicians for patient care but by non-physicians primarily for billing and administrative oversight. This has complicated clinical implementation and documentation in the US compared with other industrialized nations.
- Effective EHR use in clinical care requires that designers, implementers, and educators address different learning styles, the needs of practitioners at various stages of their careers, and patients with diverse educational, socioeconomic, and cultural backgrounds.
- Successful medical care and professional satisfaction in the age of EHRs necessitates rethinking the patient-practitioner relationship to include team-based care and documentation and new forms of patient-practitioner collaboration.
- Successful patient-practitioner-EHR relationships of the future will involve team care, increased patient access to medical records, and new ways for patients and practitioners to connect via technologies like texting, electronic consults, and telehealth.

- The well-being and satisfaction of practitioners in the age of EHRs depends on distributing tasks of patient care to a variety of practitioners, all working at the top of their licenses.
- Protecting satisfying patient-practitioner relationships and high quality care will require robust advocacy by patients, practitioners and professional groups with respect to technology designers, vendors, institutional leaders, and government officials.

Conclusion
While patients and practitioners in the United States have been affected by EHR implementation in ways comparable to other industrial nations, unique aspects of United States EHRs present challenges to the patient-practitioner relationship that do not exist in other countries.

Practice Refresh: A 1-month intervention to rebuild physician efficiency and wellness

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Learning objectives:
1. Define the components of the practice refresh pilot program.
2. Describe the impact of the pilot.
3. Identify aspects of the program that could apply within their organization.

Project objective/background
The demands of physicians' practices have grown immensely in recent years, to the extent that some physicians find the requirements of the job exceed their ability to practice effectively. In addition, physicians sometimes feel the pace of practice does not allow for improvements because there is not enough time to learn or integrate changes. This combination of issues can lead to burnout, job dissatisfaction, and poor patient care.

In late 2015, we created a 1-month pilot Practice Refresh program that initially reduces and then gradually increases the time physicians spend with patients so that physicians can learn and practice skills in efficiency, teamwork, and self-care. The goals of the Practice Refresh program are to improve physician well-being, efficiency, job satisfaction, and patient care.

Methods
A small cohort of physicians participated in the pilot. Criteria included burnout symptoms, delayed documentation in EHRs, service challenges, or a lack of joy in practice. Department leaders supported the physicians limiting patient care while they met with the Refresh team, which included the module lead, chief, physician wellness coaches, and efficiency coaches. The pilot involved a combination of coaching sessions and personalized interventions. Each physician's MA was also integral to the program. At the end of the pilot period, the physician, coaches, and chief met to discuss longer-term planning and sustainability.
Measures correspond to various facets of wellness, including:
- Time logged in to the EHR after hours
- Amount of MA assistance with patient emails
- Sick days
- Patient satisfaction scores

Results
Each of the physicians who participated in the Practice Refresh program showed improvements in at least one area:
- After-hours EHR documentation suggested an initial outstanding response with a regression over time.
- MAs increased their support of patient emails.
- The number of sick days reduced by 80 percent.
- Patient satisfaction scores, which increased significantly.

- Physicians anecdotally expressed improvements in their ability to manage their practices and increased satisfaction.

Conclusion

The Practice Refresh program was deemed successful. The program continues to be offered, and additional departments are adapting it to be more scalable. Limitations included a very small sample, as well as the intensive nature of the intervention, which makes it challenging to scale. In addition, a cadre of skilled peer coaches in desktop medicine, communication, and wellness are necessary, which may be a rate limiting step elsewhere. Metrics will need to be followed over time to determine longer-term gains.

Rebooting the joy of practice = clinical/operational leadership + workflow standardization + technology

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Learning objectives
1. Participants will learn how to use workflow observation, a data-driven performance evaluation methodology, and key technological tools to develop individualized at-the-elbow training plans for clinicians.
2. Participants will learn how to leverage clinical and operational leadership in collaboration with IT to effect meaningful changes to patient care delivery in the context of clinical teaming and standardization of workflows where appropriate.
3. Participants will learn how a brief intensive training and technology deployment intervention can improve clinician Joy of Practice.

Project objective/background

In the past year and a half, Atrius Health has focused on creating an organizational structure that is conducive to the return of "joy" in the practice of medicine. Our IT division, in collaboration with clinical and operational leadership, developed and implemented SWAT, a brief, intensive technology deployment and training intervention that is aimed at improving individual clinician's efficiency in using the Electronic Health Record. Our efforts included assessing opportunities for increased teaming and incorporating changes to the workflows of providers and the staff that support them in delivering patient care. One of the goals of SWAT is to free up non-value added time clinicians spend using the Electronic Health Record (EHR) and to remove pain points in order to improve work-life balance, decrease burnout, and improve clinician's satisfaction with the EHR.

Methods

Our SWAT team consisted of one Epic support resource for every 2 providers (Physicians and Advanced Practice Clinicians); we spent 2 weeks at each site. We used our EHR's Provider Efficiency Profile (PEP) tool and observation of clinician and team workflow to make baseline assessments and develop training plans for each clinician including deployment of voice recognition and individualized EHR enhancements. We trained clinicians in the use of a "Wide Screen" view which allows chart review, order entry, documentation and billing from a single screen, enhancing more efficient documentation and reducing clicks by approximately 1500/day/provider. This view had become available years before, but most clinicians had not adopted it. We deployed a Smartphone application for second factor authentication to allow E-prescribing of controlled substances which eliminated the need for printing and physically signing prescriptions. Throughout the development and implementation of our program, we worked closely with clinical and operations leadership. While on site, we had daily debriefs with clinical operations. We engaged practicing clinicians to speak with other clinicians on best practices. We used Survey Monkey to collect qualitative data before and after SWAT.

Results

Adoption rates of the wide screen view before and after SWAT were 11.5 and 75.0 % respectively ($p \leq$ 0.346). Qualitative data indicates that physician's time using the EHR declined after SWAT. 90% of clinicians felt the SWAT initiative helped increase their Joy of Practice.

Conclusion

A brief intensive intervention deploying new technology, providing individualized training to clinicians, and updating clinical workflow standards can be highly effective in increasing clinician efficiency in EHR use and improving Joy of Practice.

Reducing physician burnout through the implementation of patient one-piece-flow: A quantitative analysis

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Learning objectives
1. Discuss how patient satisfaction contributes to physician burnout
2. Discuss how physician wait time contributes to physician burnout
3. Discuss how patient one-piece-flow was implemented at our case study hospital

Project objective/background
This project was to address physician burnout at a regional family medicine clinic.

Methods
Using the DMAIIC framework, we discovered resident physicians spend a large amount of time waiting to precept with their attending physicians. To address this, we suggested staggering patient appointment times by ten minutes, effectively implementing patient one-piece-flow in the clinic.

Results
The results of this project are summarized in the table below. Our goal improvement percentage was given to us by the clinic.

Metric	Before (min)	After (min)	Improvement (%)	Goal (%)
Precepting Queue Time	9.1	2.3	75%	5%
Patient Wait Time	18.6	15.7	16%	10%
Patient Throughput Time	56.2	44.2	21%	10%

Conclusion
The implementation of one-piece-flow in the regional family medicine clinic realized a huge improvement in many performance metrics with no capital investment. This work is beneficial to researchers and industry professionals as it presents a novel approach to appointment scheduling and investigates the relationship between efficiency-focused projects and physician experience.

health of our healthcare workforce, patients and institutions. Further evaluation with randomization and qualitative inquiry of perceived importance of specific components of this intervention is warranted.

Reducing the stress of regulatory complaints

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Learning objectives
1. To recognize the contribution of regulators to reducing the stress on doctors
2. To understand the key areas of risk to wellbeing for doctors under investigation
3. To learn new ways to reduce the impact of regulation on doctors to improve their wellbeing while maintaining effective public protection

Project objective/background
A key challenge facing regulators is finding a balance between supporting vulnerable doctors through the stress of an investigation while maintaining effective public protection.

Finding this balance is not straightforward; legislative frameworks may limit flexibility, some doctors who are vulnerable may also have been involved in serious misconduct that requires a robust response and it is sometimes difficult to engage vulnerable doctors in the regulatory process.

Concerns about doctor suicides while under investigation, led the GMC to ask whether more could be done to ensure the stress of an investigation was kept to a minimum. It commenced work to better understand the impact of investigations on doctors and how far that stress could be reduced without reducing public protection.

Methods
The GMC commissioned an independent review of cases where doctors died by suicide while under investigation. Following that review they appointed Professor Louis Appleby, a leading UK mental health expert, to oversee a detailed review of their investigation process to establish the areas of risk for doctors and how to reduce them and best support doctors under investigation. As part of that review Professor Appleby examined detailed process maps and spoke to a range of GMC staff and UK stakeholders as well as individuals who contacted him to share their experience.

Results
In April 2016, together with Professor Appleby, the GMC announced recommendations for reform. The first phase of reform was implemented in December 2016. Phase 2 will be implemented by July 2017 with the final phase to be implemented by the end of January 2018.

The changes include better filtering of complaints to ensure complaints are resolved as swiftly as possible, a greater focus on consensual outcomes, the establishment of a specialist team to deal with cases involving sick doctors, the development of a single point of contact for doctors under investigation, increased emotional support for doctors during investigations and arrangements to pause investigations for doctors in the acute phase of an illness.

Conclusion
The GMC has made considerable progress in reducing the impact of investigations on doctors while maintaining effective public protection. Those who represent doctors, and particularly those who represent sick and vulnerable doctors in the UK, report that change is already being felt.

In 2017 the GMC is carrying out awareness raising work with the profession about its new approach.

The economic cost of physician turnover attributable to burnout

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Learning objectives
1. Participants will be able to describe the relationship between academic physicians' burnout and physician turnover.
2. Participants will be able to cite the findings of this research as another line of evidence for potential organizational financial advantage (i.e. lower physician recruitment cost) of reducing the prevalence of physician burnout.

Project objective
In this longitudinal 2-year study, our primary objective was to examine whether experiencing burnout was a predictor of physician turnover in an academic medical center and to estimate the economic burden of burnout associated with physician turnover.

Background
Retaining physicians is an ongoing challenge for academic medical centers (AMC). Physician faculty members' departure negatively affects quality of patient care, research and education, and results in significant financial burden in AMCs. Physician burnout may be a significant but modifiable predictor of physician turnover. Currently, no studies have examined the associations between burnout and subsequent turnover in AMCs in the US. Understanding the relationships between burnout and physician turnover, and its associated costs may help academic medical leaders to justify the investment of resources towards mitigation of physician burnout.

Methods
Our study sample includes 473 faculty physicians from Stanford Health Care and Stanford Children's Health hospitals who competed the Stanford Physician Wellness Survey in 2013 and consented to retention of their e-mail address to have their survey responses link across time and to other data. The survey included a previously developed and validated measure of burnout. Turnover data was compiled by a third party custodian of the data by linking the email addresses of the survey respondents to the Medical Staff email list in 2015. Physicians who had left the university, for any reason, no longer had an e-mail address listed on the 2015 medical staff list. We calculated relative risk (RR) ratio for unadjusted relationships between burnout and turnover, and logistic regression to estimate odds ratio (OR) effects adjusted for potentially confounding variables.

Results
Twenty one percent of physicians with burnout symptoms left compared with only 10% of those without burnout symptoms in 2013 (RR = 2.1, 95% CI=1.3-3.3). Therefore, departure of 11% of those who were burned-out may be attributable to burnout. The overall rate of burnout in 2013 was 26%. If these results generalize to current physician faculty members (n=2023), then over the next two years, the departure of

58 physicians will be attributable to burnout [0.11*0.26*2023 = 58]. The estimated recruitment cost per physician is $268,000 - $957,000. This means that without any intervention the estimated two-year economic loss due to physician departure attributable to burnout will be between $15,544,000 and $55,506,000 at this academic medical center.

Conclusion
Our results suggest that, compared with those who are not experiencing burnout, physicians experiencing burnout are more than twice as likely to leave their AMC within two years. This results in significant recruitment costs. Therefore, investing in interventions and strategies that reduce the prevalence of physician burnout may be an economic priority for AMCs.

A randomized trial using a compassion curriculum to reduce burnout and increase meaning for physicians and staff in outpatient practice

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Learning objectives
1. Explain the advantage of addressing physician burnout within the context of medical teams
2. Describe a multifaceted curriculum focused on compassion, mindfulness, and reflection as a model for reducing burnout
3. Review the results of this study and its impact on burnout, engagement and productivity in outpatient medical teams

Purpose
1. To assess the impact of a multifaceted, team oriented, curriculum focused on compassion training in outpatient practice.
2. Create an effective curriculum that can be replicated throughout a large health system

Background
Primary care has become increasingly complex and stressful. Burnout rates for primary care physicians approximate 50%. Primary care medical homes have been credited with improving patient care and provider satisfaction through multidisciplinary teams. Research has documented increase in physician satisfaction through the practice of mindfulness and meditation.

Methods
A randomized controlled trial utilizing medical home teams. The trial was conducted over 6 months, utilizing twelve, 80 minute sessions, providing teams with mindfulness training, self-reflection and attention to team dynamics. Recruitment for participation came from a large medical group in a single metropolitan area (23 practices). Eleven clinics volunteered and were randomized to intervention and control clinics (approximately 30 physicians+220 staff in each group).

All participants completed a 50 item questionnaire compiled from previously validated survey instruments. Key measures included: burnout, compassion, mindfulness, work-life balance, and perceived stress. Survey administration occurred at baseline, six months and 12 months, with an 80% response rate. An organization wide survey, not related to the study, was administered at 10 months measuring engagement, intent to leave job, and "meaning of work" in both randomized groups.

Each curricular session consisted of mindfulness practice, videotaped lectures, and structured exercises. Every session occurred during clinic hours with the clinic closed to patients in support of staff participation. In-clinic facilitators were recruited, trained and supported via networked phone calls and written electronic handbooks.

Results
At the end of the curriculum and at the 12 month survey, the intervention clinics, when compared to control clinics, were found to have: 1-significant reduction in burnout 2-increased markers of productivity despite 18 hours of clinic closure (panel size, visit number) 3- significantly increased engagement of staff

4-significantly increased sense of purpose and meaning in work,5-decreased "intention to leave" and 6-. Higher rating of provider and clinic by patients

Conclusion
This randomized trial demonstrates that a team-based curriculum can be implemented during work hours, utilizing in-clinic facilitators, with a significant decrease in burnout and simultaneously an improvement in important end points. The critical importance of leadership support and team engagement will be emphasized.

Health living program for physicians

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Learning objective
1. Describe a novel CME program whose goal is to improve the health behaviors of physicians and their patients

Project objective/background
The prevalence of burnout among physicians has been well documented in recent years. In addition, physicians face the same challenges as the general population in implementing healthy lifestyle behavior changes. Physicians with healthy lifestyle behaviors are more likely to counsel their patients. Finally, traditional medical education may not adequately address the skills necessary for physicians to adequately counsel patients on health promotion. For these reasons, the Healthy Living Program for Physicians was created within the Mayo Clinic Healthy Living Program in Rochester, MN. The goals of this program are to review the relationships between health behaviors, chronic disease and quality of life; help participants design their own personalized wellness plan; and help physicians develop skills to counsel patients on healthy lifestyle behavior changes.

Methods
This is a 2 ½ day immersive experience that provides continuing medical education credit. In this program physicians actively participate in individual and group sessions on diet and nutrition, physical activity, and resiliency. In addition to traditional learning methods such as lectures and discussions, participants undergo an assessment of fitness, strength, balance, and posture; complete active participation sessions with a dietitian, physical therapist, exercise physiologist, and resiliency specialist, all of whom have expertise in wellness; participate in a healthy cooking experience with a wellness executive chef; and meet with a certified wellness coach. Ongoing wellness coaching is available.

Results
Participant feedback has been uniformly positive. A research study is being carried out to determine the effect of this program on participant's health behaviors, patient counseling habits, and measures of quality of life including perceived burnout.

Conclusion
Active learning programs such as this that teach physicians about health promotion may help to improve physicians, and their patients, health and well-being. Further information about the program can be found at https://healthyliving.mayoclinic.org/physiciancme.php

Professionalism and peer support: Drivers of well-being

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Learning objectives
1. Recognize the connection between physician well-being and a workplace culture grounded in trust and respect
2. Recognize the importance of a professional accountability process in maintaining institutional trust
3. Identify the rationale for having a peer support program

Project objective/background

The well-being and engagement of our workforce is at risk. Two frequently neglected factors that can support a culture of well-being are professionalism and peer support. Respectful relationships enhance teamwork and engagement. Peer support after errors and other stressful events is crucial to building a trusting culture. This session will explore opportunities to create a supportive work environment by building programs in both professionalism and peer support.

Methods

The mission of the CPPS is to encourage a culture that values and promotes mutual respect, trust, and teamwork by:
1. Supporting colleagues dealing with emotionally stressful situations such as medical errors
2. Training in professionalism, conflict resolution and giving difficult feedback
3. Establishing a safe space for reporting concerns and providing accountability for professional behaviors

Results
- There was a significant improvement in the behavior of a vast majority of those physicians about whom professionalism concerns were raised. In addition, the professionalism training sessions were highly regarded.
- The study confirmed that after adverse events, physicians most want to get emotional support from physician colleagues.
- Dozens of institutions nationally and internationally have adopted our peer support model. At our institution we have supported over 220 clinicians in 1:1 peer support between 2012 and 2015. We have also provided group support to dozens of healthcare teams.

Conclusion

Creating a culture of trust is the responsibility of institutional leadership. Through programs that robustly support clinicians in times of stress, teach team members how to manage conflict, and hold everyone accountable for maintaining trust, our organizations can both support well-being and increase the joy we experience in our professional lives.

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RefreshMD: An evidence-based online curriculum to improve sleep in medical students

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Learning objectives
1. Describe sleep health scores, relative to national norms, in a sample of medical students
2. Characterize the feasibility of implementing a sleep improvement program
3. Understand the efficacy of RefreshMD in improving sleep among medical students

Project objective/background
Good sleep is known to have many psychological benefits including better mood, improved cognitive function, and decreased risk of burnout. Unfortunately, medical students report suboptimal sleep. To address this, we developed RefreshMD, the sleep improvement program for medical students, and investigated the feasibility and efficacy at multiple schools. Creating an evidence-based program to improve sleep health among physicians and trainees may provide a solution for organizations seeking to increase joy in medicine.

Methods
RefreshMD is a 6-week online sleep improvement program for medical students. This trial compared RefreshMD to a same-length control (an art of medicine course) in Winter 2017. Medical students at Stanford University, Washington University, and Rutgers Robert Wood Johnson were invited to participate.

Participants completed a baseline questionnaire: NIH PROMIS Sleep Disturbance, Sleep Related Impairment, and Depression scales, and Stanford's Medical Student Burnout Questionnaire. Students with elevated Sleep Disturbance or Sleep Related Impairment at baseline were identified for follow-up (halfway through intervention, immediately post-, 1 month post-, and 2 months post-intervention).

Results
Engagement
237 of 1713 invited students consented and were randomized to RefreshMD or control. Of those randomized, 74.1% of RefreshMD participants and 56.8% of control group participants viewed at least one course unit.

Sleep Health and Efficacy
Using a threshold of 24 or above (average of moderately or more on all questions) for Sleep Disturbance or Sleep Related Impairment, 58.5% of participants were identified for follow-up (Table 1).

At baseline, average scores for Sleep Disturbance, Sleep Related Impairment, and Depression were above national average: 21.9 (SD 5.5, T-score 52.1), 22.3 (SD 6.5, T-score 57.5), and 6.6 (SD 3.1, T-score 53.0). Burnout rate was 24.8% and significantly correlated with Sleep Related Impairment scores ($p<0.001$), irrespective of school, year, or gender.

At midpoint, RefreshMD participants reported increased sleep hours (+0.19 hours/night) and decreased Sleep Related Impairment (-4.2), Sleep Disturbance (-3.6), and Depression scores (-0.38). However, these changes were not significantly different from the control group changes (+0.12, -2.91, -2.69, +0.24; $p > 0.05$).

Conclusion
Medical students report high levels of Sleep Disturbance, Sleep Related Impairment, Depression, and Burnout. Sleep Related Impairment correlation with Burnout indicates that improving sleep and/or reducing sleep-related daytime impairment may help prevent or alleviate burnout.

A large portion of participants engaged with course material, indicating delivering a sleep improvement program in this format to medical students is feasible. Although modest and statistically insignificant, initial group differences observed in midpoint data suggest the possibility that RefreshMD may lead to increased sleep hours and decreased Sleep Related Impairment, Sleep Disturbance, and Depression compared to control, observable via analysis of final follow-up data. Final results will be discussed in our oral presentation.

Appendix

	Low Sleep Disturbance (<24)	High Sleep Disturbance (≥24)
Low Sleep Related Impairment (<24)	97 (41.5%)	38 (16.2%)
High Sleep Related Impairment (≥24)	41 (17.5%)	58 (24.8%)

Table 1: Cohorts divided by Sleep Related Impairment and Sleep Disturbance scores

The associations between work-life balance behaviors, teamwork climate and safety climate: Introducing the work-life climate scale, psychometric properties, bench-marking data and future directions

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Learning objectives
1. Learn about a new work-life balance measure that is based on the frequency of problematic work-life balance behaviors
2. Understand associations between work-life balance, teamwork climate and safety climate

Project objective/background
Improving the resiliency of healthcare workers is a national imperative, driven in part by healthcare workers being ill-equipped with the skills and culture to achieve work-life balance. Regardless of current policies and regulations, healthcare workers feel compelled to work more and take less time to recover from work. Satisfaction with work-life balance is routinely measured, as is work-life conflict, but how frequently healthcare workers engage in specific work-life balance behaviors is rarely assessed. Measurement of work-life balance behaviors may have advantages over measurement of perceptions; behaviors more accurately reflect work-life balance and can be targeted by leaders and decision-makers for improvement. The objectives of this study were to: 1) describe a novel survey scale for evaluating work-life climate as a metric based on specific behavioral frequencies in healthcare workers; 2) to evaluate the scale's psychometric properties and provide benchmarking data from a large healthcare system; and 3) to investigate relationships between work-life climate, teamwork climate and safety climate.

Methods
Cross-sectional survey study of US healthcare workers within a large healthcare system.

Results
7923 of 9199 eligible healthcare workers across 325 work settings within 16 hospitals completed the survey (86% response rate). The work-life climate scale exhibited strong psychometric properties (internal consistency: Cronbach α=.790). Work-life climate as described by specific behaviors correlated positively with teamwork climate (r=0.317, p< 0.001), safety climate (r=0.265, p< 0.001) and the single item similar to those in the published literature (Scheduling problems in this clinical area sometimes interfere with my quality of life, r=0.339, p< 0.001). T-tests of top vs bottom quartile work settings revealed that positive work-life climate was associated with better teamwork climate, safety climate, and increased participation in safety leadership WalkRounds with feedback (p < 0.001). Univariate ANOVA demonstrated differences that varied significantly in work-life climate scale between healthcare worker role, hospitals and clinical area. Frontline providers including resident physicians, attending physicians, nurse practitioners and physician assistants were less likely to report good work-life climate when compared to other healthcare roles.

Conclusion
The work-life climate scale exhibits strong psychometric properties, elicits results that vary widely by clinical area, discriminates between positive and negative workplace norms and aligns well with other culture constructs that have been found to correlate with clinical and organizational outcomes.

The impact of mind-body medicine skills training on health care professional burnout

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Learning objectives
1. Participants will learn what mind-body medicine techniques are
2. Participants will learn about the effect of mind-body medicine skills training on members of the health care team
3. Participants will learn how to acquire these skills individually and how groups or institutions might incorporate them into their own resource repertoire to support wellness

Project objective/background
Healthcare professionals are experiencing burnout at an alarming rate, leading to additional concerns of safety, suboptimal patient care, staff turnover, and early retirement. There is increasing urgency for institutions and individuals to identify, and provide, effective interventions to mitigate and decrease burnout in all members of the patient care team. Our objective was to evaluate the possible effect of a reproducible 5-day mind-body medicine skills training program on healthcare professional (doctors, nurses, psychologists, social workers, etc) quality of life and burnout symptoms using pre and post participation surveys. Mind-body medicine techniques include relaxation exercises, meditation, dialoguing, drawings, thermal biofeedback and autogenics, mindful eating, genograms and imagery. They are taught and experienced in large and small groups.

Methods
A pre-post study was conducted on healthcare professionals who participated in a 5-day professional training program in mind-body medicine offered by the Center for Mind-Body Medicine in October 2014. The Maslach Burnout Inventory (MBI) and the Professional Quality of Life (ProQOL) surveys were administered at baseline and at 3 months and 12 months post-intervention to measure change in emotional exhaustion, de-personalization, personal accomplishment, compassion satisfaction, and compassion fatigue (i.e., burnout and secondary traumatic stress). Mixed effects models were run to assess mean change in sum of scores from baseline at 3 and 12 months, adjusted for physician status and respondent age.

Results
100 of 125 (80%) healthcare professionals completed the baseline survey and 56 (45%) completed at least one post-intervention survey. The results of the mixed effects model indicated improvement in emotional exhaustion, compassion satisfaction, burnout, and secondary traumatic stress at 3 months, that was sustained at 12 months. The largest improvement was in emotional exhaustion with an improvement of 4.8 points at 12 months (95% confidence interval [CI]: (1.2 to 8.3); the smallest improvement was in compassion satisfaction with a mean improvement of 2.1 at 12 months (95% CI: 0.8 to 3.5). Only the domains of depersonalization and personal accomplishment did not change significantly at either the 3- or 12-month time point.

Conclusion
Healthcare professionals taking part in a 5-day mind-body medicine skills training program experienced a year-long reduction in symptoms of burnout, emotional exhaustion, and secondary traumatic stress, while improving compassion satisfaction. There is an urgent need and a shared responsibility to maximize the

The integration of a cognitive reframing curriculum in medical school: Can we lessen anxiety among medical students?

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Learning objectives
1. Recognize the importance of building coping skills in medical students and their role in driving physician health.
2. Identify the purpose of a cognitive reframing curriculum
3. Describe cognitive reframing strategies.

Project objective/background
Medical school is a stressful experience for many students. Medical students have higher rates of anxiety, burnout, and depression than their age-matched peers. As students develop into physicians, their distress can have detrimental effects on the care they provide. One technique used to reduce psychological distress in many settings is cognitive reframing (CR). CR helps individuals recognized and challenge inaccurate, irrational, exaggerated or unhelpful thoughts, assumptions and beliefs associated with distress. The introduction of a CR curriculum to medical students may serve as an important component of a comprehensive organizational level medical student health-promotion program, and it may have a downstream effect as trainees and physicians in the future. The purpose of this study is to assess the feasibility of and student response to this 90-minute small-group CR curriculum targeting anxiety common during medical training, led by their learning community faculty mentors, in a prospective, randomized, controlled pilot-study.

Methods
The study was approved by Stanford's Institutional Review Board. Ninety-two students consented to participate in the study and completed the baseline survey. Students were divided into 14 small groups and 40 of the students received the CR curriculum. During a required session preceding clinical rotations, faculty mentors 1) helped students identify an example of stress during medical training, 2) taught students to identify specific associated emotions, and negative thoughts, and 3) helped them use specific CR strategies to challenge identified negative thoughts. The remaining 52 students served as the control group, and received the standard reflection curriculum. Fifty-eight participants (63%) completed follow-up surveys two-months-post-intervention.

Results
All students present during sessions engaged in the activity. Every category in the feedback survey received an average of 3.5 or higher on a 1-5 scale. Qualitative analysis of written feedback cited peer and facilitator narratives as a strength in the curriculum. Suggestions for improvement included allowing for more discussion and limiting the amount of lecture. Intervention group participants had lower post-test scores, adjusted for baseline scores, on all measures: anxiety symptoms (standardized $\beta = -0.200$), depression symptoms ($\beta = -0.134$), emotional exhaustion ($\beta = -0.048$), and interpersonal disengagement ($\beta = -0.132$), with the greatest intervention effect observed in anxiety symptoms. However, these differences were not statistically significant.

Conclusion
Student feedback and engagement with the activity suggests this CR curriculum integrated into the current medical school curriculum is feasible. The pilot study intervention observed controlled intervention effect size for anxiety symptom reduction represents a meaningful outcome and suggests the utility of a subsequent trial adequately powered to assess intervention outcomes.

The OASIS Project: A resilience initiative in the MICU

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Learning objectives
1. Identify high impact, evidence based, practical resilience skills that can be incorporated into the existing workday of multidisciplinary patient care staff working on inpatient medical units.
2. Develop a time line and goals for implementing practical resilience programming on medical units in one's own institution.
3. Identify meaningful outcomes to assess individual and organizational health during and following implementation.

Project objective/background
Inspired by the Quadruple Aim, our multidisciplinary team executed a series of interventions targeting burnout, compassion fatigue, and issues of work-life balance by offering trainings in resilience, self-assessment, and self-care. The project sought to increase formal recognition, develop an operational workgroup to identify "impediments to joy," and sponsor events to foster social connection. We sought to create an intervention framework that might spark culture change and outlive the time line of the intervention itself.

Methods
MICU staff members were invited to participate in a confidential online survey to establish baseline measurement of our outcomes of interest. Key metrics included: absenteeism, turnover, engagement, burnout, compassion fatigue, depression, resiliency, vigor, and work-life balance. Following this pre-survey, Phase 1 of the OASIS project commenced, with monthly OASIS sessions focusing on one topic or theme (e.g., gratitude, mindfulness, conflict management) and offering education that occurred in 5-10 minute long "bite sized" experiences. One year later, Phase 1 closed, and staff were again surveyed.

Phase 2, in which ownership of joy and wellbeing initiatives is transferred from the principal investigators to MICU staff champions, commenced April 2017. Additionally, a permanent OASIS Room was dedicated, and MICU staff champions began offering quarterly joy, resilience, and wellbeing focused content. The staff will be surveyed in October 2017 to assess the effectiveness of ongoing interventions led by embedded staff champions as opposed to external researchers.

Results
A total of 25 hours of OASIS session time occurred and 330 staff exposures occurred. Institutional results showed an 18% decrease in mean monthly unplanned PTO, a 12% decrease in overall unit turnover, and a 28% decrease in nursing turnover. Although staff reported perceptions of increased job stress and the sense that their unit was understaffed, they also reported decreases in vicarious trauma, burnout, depression, and compassion fatigue, and increases in perceptions that their team was effective and demonstrated good collaboration.

Conclusion
Initiatives to increase joy, resilience, and meaning can be implemented during the workday on MICUs. This intervention showed possible relationships between "bite sized" education for MICU staff and improvements in institutional goals such as turnover and unplanned PTO, as well as increases in staff perceptions of improved camaraderie and teamwork, and decreased reports of burnout and depression

A framework for promoting resident wellness in a family medicine residency program: Evidence, successes and tensions

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Learning objectives

1. Participants will gain familiarity with the literature around resident wellness using a framework that emphasizes 3 key elements: structural changes to promote engagement, development of skills and tools for wellness and promotion of joy in practice.
2. Participants will be able to describe incremental steps they may take for programmatic change to emphasize resident wellness.
3. Participants will be able to reflect on barriers or tension points when changing program structures to foster resident wellness

Project objective/background

The growing struggle facing practicing physicians and physicians-in-training to sustain themselves for clinical careers is well documented[2, 5] as are the attendant risks if we don't advance physician wellness[3]. Our Family Medicine residency training program is a combined academic and community focused 11/11/11 program and we have felt this waning wellness very acutely amongst our learners.

Methods

We plan to use this session to describe how we have responded in phases over the past 4 years with plans to continue adapting and modifying in future years. We hope to show that over time we have incrementally added facets of what we know to promote a culture of healthy learning: structural changes to promote engagement in one's own learning and patient care, but also engagement in the broader clinical and educational environments[1, 7]; teaching residents to develop their own tools for wellness[4, 9]; and fostering physicians' joy in practice[8]. We will map our actions related to 1) structures that favor engagement, 2) development of tools and skills for wellness in residency and 3) incorporation of joy in practice, and describe the manner in which our interventions were based on available evidence.

Results

We will offer our experience with successes and ongoing struggles in implementing this multifaceted program.

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A shared vision for pursuit of the Quadruple Aim: The charter on physician well-being

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Learning objectives

1. Describe the rationale for a Charter on Physician Well-being and its usefulness for individuals, professional societies, health systems, and policy-makers.
2. Outline the guiding principles of the Charter on Physician Well-being and action plan for implementation.
3. Discuss next steps for dissemination, application, and impact of the Charter on Physician Well-being.

Project objective/background

Enhancing physician well-being to ensure patient safety, achieve high quality care, and sustain a healthy physician workforce is a national priority and has been described as the "Fourth Aim" of health systems improvement efforts. However, no universal vision or set of standards currently exists to guide those who wish to structure and implement well-being interventions. A charter that outlines guiding principles and steps to enhance physician well-being would benefit individuals, professional societies, health systems, and policy-makers seeking opportunities to improve their own programs and advocate for resources to address unmet needs.

Methods

The Collaborative for Healing and Renewal in Medicine (CHARM), a national group established to address well-being in resident physicians and medical students, developed an initial draft of the charter, which was informed by the body of literature on physician well-being. CHARM convened a meeting of representatives of multiple professional organizations over two days in August 2017,sponsored by the ACGME and the Arnold P. Gold Foundation, to finalize the consensus guiding principles and action plan for physician well-being. The resulting charter document is being disseminated to a wide audience of professional societies for endorsement.

Results

The Charter on Physician Well-being envisions well-being as more than the absence of burnout; physicians should be supported to work in an environment that enhances meaning and engagement. With a goal of achieving the Quadruple Aim, the charter outlines the following guiding principles as the foundation for efforts to improve well-being: 1) enhancing patient care and the physician-patient relationship, 2) ensuring shared responsibility between organizations and individuals and 3) improving health systems. The resulting action plan includes steps that organizations and individuals should take to optimize well-being, including promoting a culture of well-being, ensuring accountable leadership, establishing policies and systems that support sustainable and meaningful work, addressing physical and mental health needs, and dedicating time to learn and practice self-care skills.

Conclusion
The Charter on Physician Well-being establishes a shared vision and standards that professional societies can endorse as part of a unified approach to addressing physician well-being. Individuals, professional societies, health systems, and policy-makers can use the charter to understand domains of well-being at the individual and organizational levels, to target strategic interventions to meet identified needs, and to align policies with best practices. With the consensus document now developed, the conference represents a critical juncture for the charter's discussion and dissemination to a broader group of professional organizations.

Advancing faculty wellness and well-being: Our workplace, our people

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Learning objectives
1. State the resources/expertise needed to plan a wellness retreat
2. Perform a needs assessment of physician well-being within your work-unit
3. Develop programming for a wellness and well-being retreat

Project objective/background
Emergency Medicine has the highest burnout rates of any medical specialty. To address burnout amongst physicians, there has been a recent national focus on factors that promote physician wellness and resilience. Emory's Department of Emergency Medicine has had an active Wellness Committee for over 13 years with wellness and well-being remaining a top leadership priority for the Department. A retreat focused on physician wellness and well-being was organized to bring together faculty from all of the different work units. The day created a foundation for ongoing work and collaboration across the different work units.

Methods
Department Leadership identified a structure based on the Shanafelt Model of Wellness and developed a program based on the following subtopics: individual, work unit, institutional, and national. The Department Chair provided financial and administrative support for the event. The first hour of the programming was for lunch and fellowship. The second hour of the programming focused on a review of the Department's Strategic Plan with regard to wellness/well-being. Background data on burnout and the definition of common terms (burnout, resilience, mindfulness) of physician wellness were reviewed. Additionally previous department data from the Maslach Burnout Inventory and Quality of Life Scale were provided. The next portion of the retreat focused on small working groups with table leaders to discuss barriers and solutions to physician wellness at the individual, work unit and organizational levels. The day ended with a review of the discussions from the small working groups.

Results
The retreat was well attended by faculty. There was observed increase in collegiality among faculty working at different practice sites and increased awareness of University benefits surrounding wellness. Small working groups increased faculty engagement in topics related to wellness and well-being. An action plan to mitigate provider stress surrounding scheduling and our physical workspaces was developed. Participants had increased self-awareness surrounding practices to foster mindfulness and resilience. Advancing faculty wellness and well-being can begin with focused attention and dedicated time to this topic.

Conclusion
Leadership support and resources focused on creating a culture of wellness and well-being is warranted. Ways to measure impact and outcomes of this focused gathering will be created and assessed to include level of faculty participation on wellness activities on the individual, work unit, and organizational level.

Connections between physician burnout and patient safety

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Learning objectives
1. Understand why physician burnout is important and how it influences medical malpractice and patient safety
2. Identify opportunities to reduce burnout across organizations

Background
After examining safety risks in primary care CRICO, with leaders in primary care and the Harvard Medical School Academic Innovations Collaborative, developed six key safety principles (KSP), for highly reliable, safe primary care practices. The KSPs included culture of safety, patient partnership, effective teams, closed-loop processes, systems for reliable diagnosis and communication among providers. Assessment of challenges primary care providers face in achieving the KSP goals revealed a critical need to also focus on clinician well-being. We surveyed physician's experiences related to the KSPs and perception of well-being.

Methods
The survey queried respondents' self-assessment of the KSPs, in addition to a validated question about levels of burnout. CRICO anonymously administered this 40 question survey between September and November 2016 to 1,895 primary care physicians (20% survey response rate). We used linear and logistic regressions to assess association between each of the KSPs and level of burnout. Additional analysis derived pair-wise correlations between each of the KSPs and burnout.

Results
Respondents reported support (0-4 scale) for the KSPs with average responses ranging from 2.7 to 3.0. Over 30% of respondents selected supportive, effective team-based care as the most important KSP for improving patient safety. Average burnout score was 1.5 (0-4 scale), with 41% reporting at least one symptom of burnout. Pairwise correlation analysis of KSPs and burnout revealed negative significant effects for 5 out of 6 KSPs on burnout with p-value < 0.0001 and Pearson coefficients ranging from -0.27 to -0.17. For the team based care KSP the effect was slightly negative (-0.08) with p-value at 0.10. In the regression models, team-based care behaved differently from other KSPs and had a positive significant effect on burnout. A factor analysis was performed to validate the conceptual framework of the survey and KSPs.

Conclusion

Conclusion

It is critical to understand physicians' perceptions of key principles associated with safe, reliable care. The themes in our KSP are supported by the factor analysis suggesting that the initial framework represents a valid and useful foundation for primary care safety and malpractice risk reduction. The unexpected finding of a positive correlation between teamwork and burnout suggests that the mere presence of teams in primary care may not be sufficient to prevent burnout and suggests the need for more attention to the effectiveness of team function. Results of this survey support ongoing work to address patient safety in primary care aligned with the KSP of safe reliable care.

Creating learning and practice environments that support resilience: Tips to engage institutional leadership

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Learning objectives
1. Effectively articulate reasons to implement system-level interventions that foster institutional culture change to promote provider well-being, blending narrative and supporting data.
2. Develop and prioritize strategies and deliverables to achieve the aim of changing your institution's culture to one that values wellness, and "pitch" these to your institutional leadership.
3. Negotiate a change, implement a new program, and strategize for a longitudinal plan to continue to monitor and promote wellness at the institutional level using validated communication techniques.

Project objective/background
Burnout among physicians continues to gain attention in both the medical and non-medical literature. Many have declared an epidemic of burnout among physicians- both those in practice and in training. While a lot of attention has been given to strategies that individuals can employ to mitigate burnout and promote resilience, less attention has been paid to the imperative of effecting culture change at the institutional level.

Strategies to combat burnout and restore joyful practice must transcend individual self-improvement methodologies. A growing body of literature supports the concept that health systems can be more effective and productive when their workforce has a greater sense of well-being. Organizational solutions that augment satisfaction and reduce toxicity in the practice environment are essential and need to be discussed with institutional leaders. Skillful communication is the foundation, catalyst and currency of environmental transformation; yet, these skills have not figured prominently in our professional training. Physicians often have difficulty articulating their mission and vision to institutional leaders. Effective communication skills are the catalysts for preventing burnout and promoting wellness among health providers.

Methods
A workshop entitled: *Creating Learning and Practice Environments that Support Resilience: Tips to Engage Institutional Leadership* was previously developed. The workshop was designed to arm participants with the data and skills necessary to effectively engage institutional leadership to promote lasting institutional level innovations to support learning environments that promote resilience. Components of the workshop include: 1. Making the case: Review of literature summarizing three imperatives to "make the case" for institutional support for changes that promote provider wellness. 2. Packaging the message: Components of an effective "elevator pitch" are introduced. Participants create a "wellness pitch" and receive feedback on it. 3. Negotiating Change: Tips for effective negotiation are reviewed. We hope to deliver the contents of the previously developed workshop, either through poster or oral presentation.

Conclusion
Institutional transformation is imperative if practice environments are to become ones that support resilience and the joy of practice. Effective communication with institutional leadership is the catalyst for this change. Using data driven talking points, this content provides participants with tools to effectively

and concisely express new ideas to academic leadership, as well as tips to negotiate for change. Through persistent efforts, using effective communication, institutional efforts can be aligned with changes to support physician well-being.

Designing well-being: The impact of a program using design thinking to engage residents in development of organizational well-being interventions

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Learning objectives
1. Describe how design thinking strategies can be used to engage residents in developing solutions to organizational well-being challenges.
2. Outline resident-identified design principles for organizational well-being interventions.
3. Examine the impact of participation in the development of organizational well-being initiatives on residents' perceived impact and self-efficacy.

Project objective/background
Physician well-being is a complex challenge requiring a multi-faceted approach to address individual and organizational influences. Design thinking uses a human-centered approach to develop creative solutions for complex problems. We developed a longitudinal program to engage internal medicine residents in creating well-being interventions using a design thinking framework. We hypothesized that this program would generate new organizational approaches to enhance well-being, and would improve perceived self-efficacy and empowerment for participating residents.

Methods
For eight months, resident participants attended a two-hour facilitated design session every other month, with independent work between sessions. In Session 1, participants learned design thinking principles and practiced interviewing to identify well-being themes, then conducted interviews with non-participating residents or residents' family/friends. In Session 2, teams identified salient interview themes, including isolation and self-doubt, value of peer/program support for difficulties, and scheduling/time constraints. Teams used these themes to identify a challenge, applied ideation brainstorming techniques to generate potential solutions, and selected an idea to test. Each team implemented an experiment between sessions, and used feedback to repeat the design cycle and refine their projects in Session 3. In the final session, teams summarized results and generated recommendations to program leadership. Participants completed a pre-post survey using validated measures of empowerment and creative self-efficacy, and completed a semi-structured exit interview exploring creative themes of self-efficacy, perceived impact, and personal and organizational well-being.

Results
Twenty-one residents participated. A majority of participants had little/no familiarity with design thinking and had never developed well-being interventions. All teams chose to develop projects to enhance community and support. Iterative testing of four innovations over two design cycles elucidated several design principles, including 1) harnessing senior residents' experience 2) building smaller structured communities within the program 3) enhancing team camaraderie and joy through everyday work and friendly competition 4) implementing well-being interventions at the right time and place. These design principles formed the basis for developing a new residency support structure incorporating formal communities and near-peer coaching. Significant increases in the impact domain of psychological empowerment and in creative self-efficacy were observed among residents who participated; participants

also highlighted changes to their own views about well-being and the value of the process to promote "outside-the-box" thinking for difficult problems.

Conclusion
Design thinking techniques can help residency programs develop impactful, learner-driven initiatives to address organizational challenges. Design principles emerging from this process highlight residents' desire to determine their own needs, enhance community, and provide peer support to improve well-being. These results suggest that design thinking's emphasis on human-centeredness may be especially suited to develop well-being interventions that enhance organizational culture and engagement.

Environments matter: Reconsidering gender, physician burnout and workplace culture

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Learning objectives
1. Identify environmental factors that might affect burnout differently among male and female physicians.
2. Assess how stereotyping and implicit gender biases in medicine can lead to unsupportive working environments for female physicians.
3. Recognize gender as an important variable in the physician burnout literature.

Project objective/background
Data on gender differences in physician burnout are lacking. In 2001, Linzer and colleagues analyzed this question in the US and the Netherlands, finding that US women experienced more burnout than men, with no significant gender differences in the Netherlands. More recently, some studies have uncovered associations of gender with burnout[1,2] while others find no such association.[3] Research has also shown that men and women experience burnout differently and employ different coping mechanisms.[4,5] At the same time, burnout rates have been shown to vary significantly by medical specialty, which determines an individual's working environment.[6,7]

Methods
From 2012-2017, Stanford Medicine conducted two in-depth surveys of Physician Wellness, as well as a study of stereotype threat among junior faculty and a study of implicit biases towards gender and leadership across academic medical departments.

Results

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In academic medicine, at our own institution, Stanford Medicine's 2016 Physician Wellness Survey uncovered a burnout rate among women of 39% compared with 28% for men and professional fulfillment among women was 13% compared to 20% for men.[8] In addition, Culture of Wellness, generally fostered at a department- or specialty- rather than institutional-level), was the strongest determinant of professional fulfillment. Relatedly, in a study of junior faculty at Stanford Medicine, women reported greater susceptibility to stereotype threat than men, a phenomenon thought to be caused by the unsupportive working environments for women[9] and another study uncovered prominent implicit biases for males in leadership in academic medicine, which contributes to feelings of inadequacy among women in the field.[10]

Conclusion: Given indications of possible gender differences in burnout and professional fulfillment along with the primacy of workplace culture in impacting workplace stressors, a focus on physician burnout should consider how working environments might affect burnout differently for male and female physicians. Do specific specialties that are stereotypically masculine/macho affect burnout for men and women differently? Do environments that focus on care or compassion work, generally associated with female traits, affect burnout for men and women differently? The intersection of gender, burnout, and culture among physicians is an area rife for research.

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Good grief rounds: Debriefing difficult situations to foster resilience and increased sense of community in care providers

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Learning objectives
1. Describe the scope of burnout, secondary trauma, and suicide among care providers
2. Summarize the literature on storytelling, mindfulness and humanities interventions that increase care provider resilience
3. Discuss the goals, structure, and evaluation data of Good Grief Rounds.

We work in a fast paced, emotionally charged and often distressing environment. Many care providers experience a lack of support, education, and skills to deal with difficult situations they face. The literature on health care provider grief is not robust however statistics on burn out, secondary trauma, and suicide suggest a need for interventions that increase resilience for care providers.

Good Grief Rounds is a one-hour program in which the humanities, mindfulness, and storytelling in both large and small groups is used to debrief emotionally difficult cases. One provider, usually an experienced clinician, sets the tone by telling a story revolving around a salient theme that role models vulnerability and the search for meaning. The group of providers then break into dyads or triads so that each participant can tell their own story about a clinical situation in which they have struggled or found meaning. The sessions close with a brief large group discussion which elicits insights from the storytelling.

Evaluations collected from 156 participants in Good Grief Rounds over 8 sessions demonstrated that over 90% of participants stated that the session was valuable/relevant to their work, useful and that they enjoyed the format. Participants are from diverse disciplines and include medical students, residents, attending physicians, chaplains, social workers, advanced practice providers, nurses, speech therapists, occupational therapists, and physical therapists.

This poster session will illustrate Good Grief Rounds by providing examples of the schedule, ground rules, speaker instructions, readings from humanities, themes and mindfulness exercises. Understanding and implementing Good Grief Rounds may help decrease feelings of burnout and isolation while increasing resilience and fostering a sense of community among care providers.

Group coaching for internal medicine residents: Developing tools for career decision-making

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Learning objectives

1. At the conclusion of the presentation, participants will know the structural components of a group coaching model for use with residents.
2. Participants will learn curricular components of a group coaching program that helps define values and then uses that knowledge for future decision-making.
3. Participants will know the challenges of creating a successful coaching intervention for physicians in training.

Project objective/background

Most internal medicine residents experience indecision and feel overwhelmed when trying to decide on a career path. This pilot, group-coaching program sought to address this driver of stress. The objectives of the group coaching sessions were to create a safe, supportive, and social environment to explore personal interests and values and, from these, to create a framework for future decision-making.

Methods

Six of 14 second-year primary care track residents of the Internal Medicine Residency Training Program at the University of Colorado voluntarily joined the program, which included four, two-hour group coaching sessions, outside of work hours, at a non-work site. The author, a board-certified, practicing internist and professional healthcare coach, developed the curriculum. Coaching topics included personality traits, values, personal vision, and practical life tools such as a scheduling. Five of the six residents completed a pre-coaching questionnaire, responding to questions about goals, talents, personality traits, and personal wellness habits. Each session began socially, followed by a structured topic presentation and interactive discussion or activity. Residents were given a journal and asked to reflect either during or after sessions. Preparation work was requested of the participants in advance of each session.

Outside of the group work, five of the six residents engaged in a one-on-one coaching session with the author and program leader to define personal values; the sixth resident defined his through a group exercise.

Results

The program was assessed by both informal and formal feedback. Informally, the residents unanimously affirmed the value of the project and stressed the importance of it being completely voluntary and occurring outside of their work environment. They were especially vehement that this work requires a safe emotional space.

Formal feedback results from five of the six participants:

All rated the experience as valuable and helpful and all answered affirmatively that they would engage in additional coaching if offered the opportunity. The values work was cited as the most helpful part of the

course (5.0/5.0), with scheduling template, personality traits, and personal vision work rated as also very worthwhile.

Conclusion
Group coaching offers great potential as a way to create community, discuss the joys and challenges of being a physician, and assist young physicians in defining life values and goals. Expanding this pilot to a three-year curriculum supporting residents throughout their training is the next goal. Time and financing are challenges but not prohibitive.

House officer mental health: Improving access and reducing barriers to treatment

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Learning objectives

1. Learning objective: Participants will be able to identify common barriers to mental health treatment in an established, "in-house" program developed to meet house officer mental health needs.
2. Learning objective: Participants will gain insight into current priorities and preferences vis-à-vis mental health treatment in the house officer population.
3. Learning objective: Participants will learn how to pragmatically troubleshoot common barriers, using multimodal technologies, in order to increase house officer access to and satisfaction with mental health treatment.

Project objective/background

Medical training is a critical time in a physician's development. High depression rates, along with lower rates of treatment seeking during residency, can have dangerous impacts on physician well-being, career satisfaction, and patient care. As a pioneer "in-house" program developed to meet house officer mental health needs, The University of Michigan House Officer Mental Health Program has been operational for 19 years. Given the growing spotlight on physician wellness, we sought to gather information about current perceptions about and access to this program, with the ultimate goal of reducing barriers to quality mental health treatment for our medical trainees.

Methods

An anonymous survey was sent to all University of Michigan house officers assessing views on mental health, treatment seeking, barriers, and satisfaction level with our program. Questions specifically asked about burnout, mental health problems, concerns about emotional well-being, and awareness of/satisfaction with our program; questions about access and barriers to engagement in mental health treatment in general were also posed. Finally, qualitative questions gauged program satisfaction levels and elicited suggestions for improvement. After data collection, trends were identified, targets for quality improvement were concretized, and initiatives to reduce barriers and improve access to services were implemented.

Results

Of the 1200 house officers employed by the University of Michigan, 646 responded to the survey. Residents experienced concerns about their emotional well-being (57.7%), burnout (22.0%), emotional exhaustion (22.5%), and mental health problems (19.8%) during residency. They were uncomfortable seeking support from their residency program and were far more likely to seek support outside of work. There was a significant difference in the percentage of residents aware of our program (68.9) versus those who had accessed it (10.4). Confidentiality, appointment flexibility, quality of services, and scheduling ease were most important in the consideration of mental health treatment. Areas of dissatisfaction with our program included: lack of after-hours availability, inconvenient location, scheduling difficulties, confidentiality concerns, and potential negative impact on career.

Conclusion

There are ongoing roadblocks to residents' accessing quality mental health treatment, despite high rates of illness, and definite target areas for improvement in a clinical program designed to address the mental health needs of house officers. These include pathways for wellness promotion and maintenance, and initiatives to improve treatment access (online/mobile scheduling and resources, telepsychiatry, and collaborative systematic efforts to protect confidentiality). These will be outlined in our presentation, as we expect that these efforts will reduce barriers for residents in distress.

How to provide a centralized model of wellness to optimize physician health

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Learning objectives

1. Learn resources to promote well-being of staff, patients, and caregivers in an academic setting.
2.   Provide a model of how to integrate wellness services throughout hospital and clinic settings.
3. Introduce measurement tool to assess compassion fatigue within the medical setting.

Project objective/background

The Huntsman Cancer Hospital and Outpatient Clinics at the University of Utah's Huntsman Cancer Institute (HCI) have taken an innovative, proactive approach to create a culture of wellness that supports professional resilience within our healthcare setting. The Linda B. and Robert B. Wiggins Wellness and Integrative Health Center (founded July 2005) is uniquely, centrally located on the first floor of the hospital and has been patient-driven since its origin. Inspired to create a culture of wellness, the center now provides three dozen services to staff members, in addition to serving patients and their loved ones.

Administration-supported endeavors related to compassion fatigue for staff began in 2010 with mandatory training, requiring all outpatient clinicians and support staff members to attend a series of educational sessions and experiential interventions related to burnout, compassion fatigue, and work-life balance. Since that time, staff wellness resources have evolved to provide the following self-care options: acupuncture, artist-in-residence workshops, cooking classes, group fitness classes and movement modalities (thirty-one weekly classes), laughter therapy, massage therapy, osteopathic manipulative treatments, and physician writing workshops. Additional system-wide compassionate workplace initiatives include: restoring balance retreats; guided meditation, mindfulness, and relaxation groups; massage chairs for every remodeled clinic and hospital unit break room; and monthly Schwartz Rounds (a lunch forum for medical staff, at which they may explore their feelings surrounding the complexities of compassionately caring for patients).

The wellness center employs two physicians from the Division of Physical Medicine and Rehabilitation, six cancer exercise physiologists, eighteen group fitness instructors, two psychotherapists, four

acupuncturists, three registered dieticians, two folk-lore professors (English and Ethnic studies), eight massage therapists, six creative arts therapists (artists-in-residence, music therapists, and a writer-in-residence), and six support staff.

Our hospital administration has developed a robust, multi-faceted resilience program for all staff through administrative, value-driven goals that commit to the development of these unique resources. These programs benefit individuals while collectively changing the institutional culture to promote wellness, work-life balance, peer support, and a sense of meaning in work life. Our program serves as a model for other institutions that are interested in developing a culture that promotes resilience and wellness.

Improving the resident primary care experience: Lessons from the academic innovations collaborative

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Learning objectives
1. Access specific examples of how resident practices have improved resident experience in clinic
2. Consider which of our seven key change concepts to improve resident experience would be most impactful and implementable at your practice
3. Develop specific, sustainable strategies to improve resident experience at your practice

Project objective/background
Value-based reimbursement is arriving quickly and has put an increased pressure on resident clinics and residents to emphasize core competencies in quality improvement, systems-based practice, and team-based care.

In 2012, The Harvard Medical School Center for Primary Care (the Center) founded a learning collaborative designed to facilitate practice transformation and improvement in primary care teaching clinics through the promotion of shared learning and dissemination of best practices.

This poster outlines the experience of the Center's collaborative partly focused on transforming the resident experience in the clinic, the Academic Innovations Collaborative (AIC).

Methods
The Center introduced a driver diagram aimed at "improving the resident primary care experience" with seven key primary drivers. This conceptual model was shared with all AIC primary care teaching clinics at one of its thrice-yearly in-person retreats, called "Learning Sessions."

Learning Sessions brought together teams of multidisciplinary staff from each clinic to exchange best practices, develop skills, strategize, and share work with leadership from their respective organizations. The inclusion of residents at these sessions was core to the AIC's success.

Results
Of the 28 AIC primary care teaching clinics, 27 implemented changes to improve the resident experience in clinic. Although each approached this by targeting different key determinants for change, after 18 months of pursuing the aim of "improving the resident experience", four primary drivers (of the original seven) have risen to the surface as **critical first steps for achieving the aim of improving resident experience**:
1. Create a Supportive Learning Environment
2. Engage Residents Meaningfully in Teams
3. Coordinate Residency and Clinic Leadership
4. Promote Resident Agency

Conclusion
In this poster, we'll present examples and lessons we've learned while running a 4-year collaborative to drive improvement within 28 primary care resident clinics, specifically focused around our driver diagram and key change concepts to improve resident experience.

Innovation in personal resiliency: A perspective on high yield techniques to resiliency added for boosting physician wellness programs

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Learning objectives
1. Participants will understand the current challenges in personal self-care practices based in mind-body wellness techniques.
2. Understand the need for greater impact in physician resiliency through the use of innovation in self-care.
3. Appreciate the benefits of SKY Breathing Meditation that research currently shows, and its application as an innovation tool to enhancing physician wellbeing and resiliency.

Project objective/background
Current literature addressing the need for physician wellbeing programs commonly use mindfulness based practices, cognitive behavioral tools, narrative reflections, and shared dialogues as tools. While all these interventions show some benefit bringing relief, a recent meta-analysis in JAMA suggests "intervention programs for burnout in physicians were associated with small benefits," raising the question: how can we create greater impact in personal resiliency? Creating a powerful yet sustainable shift, one which acts as a "turbo-engine" to existing resiliency interventions is necessary to sustain joy in physicians practicing medicine over a lifetime. The author suggests innovation in physician wellness by incorporating lesser known but high yield 'mind-body' techniques to enhance resiliency.

Methods
The perspective on adding a higher yield mind-body technique to existing strategies comes from a thorough understanding that most physicians struggle with a highly stimulated nervous system creating a chronic sympathetic drive coupled with ongoing fatigue. Often physicians report difficulty in sustaining meditation and benefits from a deep meditative state remain elusive. Research of SKY breathing meditation suggests a profound, global shift in the mind-body complex of participants. Multiple mechanisms are involved. This includes a physiologic shift in the autonomic nervous system promoting parasympathetic arousal within the first two sessions. Other mechanisms range from a return of homeostasis in biologic markers of chronic stress, improvement in antioxidant enzymes, enhanced cardiovascular, respiratory and immune function, improved emotion regulation, reduced anxiety and depression, EEG evidence of restful alertness in brain activity, and epigenetic changes in cellular gene expression. Incorporating SKY breathing meditation can allow other mind-body practices to be higher yield as the starting physiology is more conducive for deep meditation.

Results
A 4 day pilot program for faculty wellness incorporating SKY breathing meditation showed: 96% reduction in stress perception, 96% reduction of anxiety, 83% reduction in feelings of anger, a 75% improvement in sleep, 96% improvement in the ability to remain calm, an 88% increase in maintaining focus, being optimistic, and improvement in mood. Data from this preliminary trial supports the development of a multi-centered pilot program where one core component is the SKY breathing technique.

Conclusion
SKY breathing meditation is an innovative addition to building personal resiliency. The Advanced Physician Wellness Program aims to study the impact of a comprehensive program including SKY breathing meditation on physician resiliency. If physicians could experience faster and deeper results from meditation based self-care, we anticipate life-time use and sustainability of these practices to be more successful.

Leadership training targeting physician burnout

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Learning objectives
1. Identify signs and symptoms of burnout
2. Recognize the role of emotional intelligence and self-care in leadership for burnout management
3. Develop, as leaders, a practical approach for training residents and faculty in emotional intelligence and self-care to combat burnout

Physician burnout is a malignant, contagious phenomenon with significant morbidity and mortality for providers and patients alike. Burnout affects any and all of the 6 ACGME competencies. Burnout can be traced back to six sources: workload, control, community, fairness, reward and values. Major problems with physician burnout include lack of awareness, lack of symptom recognition, inability to self-diagnose, and inability to self-protect and self-manage.

Burnout is prevalent throughout the stages of premedical and medical training. Over 50% of students and trainers/leaders are affected by severe burnout. The art and science of teaching medicine is hindered by the susceptibility of the trainers themselves to burnout and its consequences without having the tools to diagnose and combat it. Medical knowledge, practice approaches, and technical proficiency are taught and learned both during medical school and in residency training programs; this is also when self-care habits and work/life balance need to be taught and learned. The literature has shown that medical schools and residency programs lack two key ingredients in training that help prevent burnout and mitigate its effects: emotional intelligence (EI) and self-care. Research has also shown that these ingredients are almost foreign concepts to attendings, professors, medical programs and institutions alike. Physicians frequently express frustrations that the profession taught is not the profession practiced. Specifically, studies show that physicians lack in certain abilities and skills, such as EI and self-care. If we are to produce the best possible physicians, we need to arm them with best practices in medicine, and with best practices in EI and self-care.

In 2016, Shanafelt et al. outlined a 9-step approach to combat physician burnout. One of the key ingredients is leadership development. The literature shows that very few things have been more instrumental in leadership development than emotional intelligence. Coupled with self-care techniques that are reproducible on a personal as well as a professional level, the fight against burnout needs to start during training. It cannot possibly succeed without first educating and arming the leaders/trainers/attendings and program directors with the necessary tools and knowledge.

Self-care techniques and the science of emotional intelligence have emerged as top candidates for such a task. The proposed presentation/perspective seeks to introduce programs to practical, concrete and validated steps in leadership training in self-care and emotional intelligence. Further, by training the trainers, the perspective will focus on the implementation and incorporation of the learned techniques/sciences into the whole program.

Mixed-up mindfulness: Using a convergent mixed methods design to assess the impact of mixed patient-physician MBSR classes

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Learning objectives

1. After reviewing this poster, learners will be able to explain the purpose and utility of convergent mixed method design
2. After reviewing this poster, learners will be able to describe a Mindfulness Based Stress Reduction course taught to a unique, mixed population: physicians, oncology patients and family members of the physicians and patients.
3. After reviewing this poster, learners will be able to list the outcomes of a pilot study of this MBSR course.

Project objective/background

Beaumont Health System is addressing physician burnout and stress by offering the standard Mindfulness Based Stress Reduction (MBSR) course curriculum to a mixed population of physicians, oncology patients and family members of the physicians and patients. MBSR was developed for and has been used with heterogeneous participant populations but this unique combination of participants and study methods has not been reported. There is a growing body of clinical and basic science research strongly supporting the efficacy of MBSR in addressing physician burnout and stress but no studies have adhered to the standard curriculum which involves 29+ contact hours in eight weekly classes, an all-day class and 45-60 minutes of daily home practice. We were curious if physicians would participate and complete the full MBSR course. Also, in medical encounters, physicians and non-physicians often experience a sense of "otherness" and we wondered about the impact of allowing them to explore their commonalities as they progress through the life and brain changing experience of MBSR. A convergent, mixed methods study design was chosen as a means of exploring the outcomes and understanding the process of the participants.

Methods

Between January and May 2017, 15 attending physicians and 23 non-physicians participated in the MBSR course taught by a certified instructor (RL). All participants completed a pre- and post-course Perceived Stress Scale (PSS) and a post-course narrative evaluation. Physicians also completed a pre- and post-course Maslach Burnout Inventory (MBI)

Results

14 physicians and 22 non-physicians completed the course.

Table: Change in PSS Before and After MBSR Intervention using Paired T-Tests

Population	Avg. Pre-MBSR PSS	Avg. Post-MSBR PSS	Avg. Change In PSS	P-Value
Patient + Physician	17.8	12.6	-5.2	< 0.0001
Patient	17.8	12.6	-5.2	0.0010
Physician	16.5	10.3	-6.2	0.0012

The results are as follows:
- For patients and physicians combined, the average Perceived Stress Scale (PSS) of 17.8 before the MBSR intervention significantly decreased by 5.2 points to an average of 12.6 after the MBSR intervention (P = < 0.0001).
- For patients, the average Perceived Stress Scale (PSS) of 17.8 before the MBSR intervention significantly decreased by 5.2 points to an average of 12.6 after the MBSR intervention (P = 0.0010).
- For physicians, the average Perceived Stress Scale (PSS) of 16.5 before the MBSR intervention significantly decreased by 6.2 points to an average of 10.3 after the MBSR intervention (P = 0.0012).

Table: Change in MBI Dimensions Before and After MBSR Intervention using Paired T-Tests

Dimension	Avg. Pre-MBSR MBI	Avg. Post-MBSR MBI	Avg. Change In MBI	P-Value
Personal Efficacy	28.8	31.5	2.7	0.1014
Exhaustion	16.7	9.7	-7.0	0.0073
Cynicism	10.5	7.0	-3.5	0.1412
Emotional Exhaustion	22.1	13.6	-8.5	0.0121
Depersonalization	5.3	2.4	-2.9	0.1204
Personal Accomplishment	33.8	37.2	3.4	0.0455

The results are as follows:
- The average Exhaustion dimension score of 16.7 before the MBSR Intervention significantly decreased by 7.0 points to an average score of 9.7 points after the MBSR Intervention (P = 0.0073).
- The average Emotional Exhaustion dimension score of 22.1 before the MBSR Intervention significantly decreased by 8.5 points to an average score of 13.6 after the MBSR Intervention (P = 0.0121).
- The average Personal Accomplishment dimension score of 33.8 before the MBSR Intervention significantly increased by 3.4 points to an average score of 37.2 after MBSR Intervention (P = 0.0455).
- There was no statistically significant change before and after the MBSR Intervention for the Personal Efficacy, Cynicism, and Depersonalization dimensions of the Maslach Burnout Inventory (all P = > 0.05). However, all of these measures trend in a positive direction.

Qualitative data analysis is pending. One excerpt from a physician is as follows: At first I thought it (having patients/family in the class) was very unusual and did not feel much of a connection which completely dissolved after "getting to know" patients and I realized that we all struggle with the same stuff (at different levels). This is when patients turn into people!

Discussion

This pilot study demonstrates the feasibility of physicians and non-physicians completing an MBSR course together with significant improvement in PSS and MBI scores. Analysis and integration of qualitative results will illuminate the experiences of participants and offer a deeper understanding of the quantitative results. This study lays the groundwork for further growth and study of a promising intervention to address physician burnout.

Peer group support for physicians in malpractice litigation

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Learning objectives
1. List the manifestations of emotional distress associated with being a defendant in a medical malpractice lawsuit and its adverse impact on the continued ability to achieve joy in the practice of medicine.
2. Describe a model of facilitated peer group support for malpractice defendants and identify barriers to implementation.
3. Explain how these groups contribute to a culture of wellness, enhance the effective engagement in the legal defense against the malpractice claim, and foster the transformation of a traumatic experience into an opportunity to gain strength and increase self-knowledge and compassion.

Project objective/background
Many physicians will be sued for malpractice in the course of their careers. Estimated rates are as high as 75% for low-risk specialties and 100% for high-risk specialties. Being sued is stressful and can cause anxiety, depression, feelings of shame, confusion, anger and fear. It is a crisis, which can threaten professional identity and sense of self. Because doctors are usually told not to discuss their cases with anyone, the experience of isolation may be profound. The litigation process can last years. Physicians' wellbeing and professional functioning can be significantly affected. Many doctors who are sued consider leaving medicine. Some do. Some become suicidal.

Methods
For ten years, we've led groups for physicians to help them navigate the litigation process. Facilitated peer resource and support groups provide a safe, confidential place for physicians to talk about how they are coping, and how their work is affected. Connecting to peers in this structured setting can normalize reactions, put experience into perspective, reduce feelings of isolation and shame, instill hope, strengthen constructive coping and self-care, and restore a sense of competence. The group meetings focus on experience, not content of the cases. Participants attend the monthly or twice monthly groups as often as they wish, and for as long as they wish.

Results
Physicians who have participated in peer groups say that being sued is one of the worst experiences of their lives. Some say it's worse than losing a loved one. They tell us that being part of a peer group, they feel less isolated, less anxious, more self-compassionate, and better able to focus on continuing to practice, and more able to participate in their own defense. Once through their trials, they also feel gratified by the opportunity to share their hard-won wisdom with peers who are at the beginning of the process. This avenue for altruism fosters resilience, and provides hope for others.

Relative to the number of physicians sued, few participate in such groups. Some barriers are practical (scheduling conflicts, lack of availability) others are cultural: the stigma of asking for help, fear of appearing weak or vulnerable, and fear of exposure. Institutions and practice groups may promote a culture of wellbeing by supporting access to peer resource groups, and by encouraging participation as an integral part of responding to litigation.

Conclusion: Physician peer groups are an underutilized and potentially powerful avenue for supporting wellbeing and promoting a culture of wellness.

Physician coaching: Determining the right dose

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Learning objectives
1. Understand the application of coaching as a solution for physicians' resilience and performance needs
2. Understand the design of two coaching models differing by scope and intensity of need
3. Understand organizational approaches to offering such resources

Project objective/background

Because coaching is tailored to accomplish specific goals in a specific context, the intensity and duration of coaching can vary with the needs of physician clients. A briefer intervention can be sufficient for promoting resilience and efficiency, while an in-depth intervention is needed when burnout has compromised performance or engagement. The project describes and examines examples of each.

Methods

The proposed presentation will compare and contrast two models of physician coaching:
1. A standardized "mini-dose" coaching model currently under study at four Boston-area primary care physician group practices with 60 PCPs enrolled. The intervention itself is comprised of 6 sessions (one hour in-person and five half-hour telephonic sessions) over a 3-month period. Preliminary observations, drawn from the corresponding author's role as Principle Investigator, have shown success in domains of self-care, workplace efficiency, patient/provider engagement and process improvement.
2. A customized "maxi-dose" approach to remedial coaching for flagging performance or workplace withdrawal/conflict. This model is widely used in organizationally-sponsored coaching. It is typically comprised of 12-24 one-hour sessions over the course of a year, with built-in support from workplace sponsors. Examples will be drawn from the authors' personal coaching practices. The model has been applied successfully for meeting clients' stated performance goals and maintaining good standing in their workplaces.

Conclusion

Both interventions are scalable at the organizational level and can represent cost-effective interventions for preserving physicians' morale, performance, and continued active presence within their practices.

Physician to physician mentorship program

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Learning objectives
1. Understand the value of a physician mentorship to foster a culture of wellness
2. Learn how to start a mentorship program
3. Understand how physician mentorship can help physicians seek professional mental health services

Project objective/background
In 2013, the Southern California Permanente Medical Group (SCPMG) at the Fontana Medical Center recognized the need to provide physician colleagues a safe, confidential, and accessible resource to address physician burnout. Physicians were apprehensive to use existing resources when in the midst of burnout. In 2014 a Physician to Physician (P2P) mentorship program was organized as part of the local SCPMG Physician Wellness Program. The purpose of the P2P program is to provide physician mentors who are able to support their physician colleagues in need.

Methods
Physicians were called upon to volunteer to be part of the mentorship program. The P2P program was led by two Physician Wellness Champions, along with the support of Medical and Hospital Administration. Training of Physician mentors was carried out by the Employee Assistance representative, a Psychologist, and a Licensed Clinical Social Worker. Orientation included an overview of mentorship responsibilities, resources to refer colleagues to if needed and support so that they could remain well while helping their colleagues. Trainings on a quarterly basis addressed a variety of topics, including recognizing red flags, active listening skills and role playing situations. Mentors were paired with self-identified physicians who sought help in areas like work-life balance, personal conflicts, stress, burnout, etc. Mentors were instructed to help facilitate referrals if professional counseling and/or Psychiatry counseling was indicated. All mentor-physician interactions were considered confidential.

Results
The P2P Mentorship Program has over 40 physicians from several specialties. A 2015 survey of P2P Mentors (N=12), found that 21 physicians sought help from a mentor. Mentorship occurred over a 2 week – 2-month period with an average of 1-3 encounters. Physicians sought mentorship for burnout, depression, anxiety, legal cases, work conflicts, financial issues, as well as medical, and substance abuse. The P2P program has helped develop a new physician culture that allows for vulnerability, collegiality, and fosters wellness for physicians. The physician mentors state that their own wellness has improved because of the collegiality, the personal training on stress and burnout, and an increased sense of giving back to their colleagues.

Conclusion
The P2P Mentorship Program promotes physician wellness among a group of physicians that might not otherwise seek help by providing a collegial, safe, accessible, and confidential place to seek help. The P2P program promotes wellness by not only supporting peers in a meaningful way but also via collegiality and a sense of purpose for those participating as mentors.

Physician wellness: The solution is hidden in plain sight

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Learning objectives
1. Explore the idea of Physician Health as an additional sub-specialty within Family Medicine, Internal Medicine, Emergency Medicine or Psychiatry
2. Brainstorm the structure and potential components of the proposed sub-specialty of Physician Health that will be most useful and effective in combating burnout and promoting wellness among physicians and residents. In other words, should it be a series of workshops, a certificate program, a diploma, a Masters or a fellowship?
3. Identify obstacles to the creation of a new sub-specialty and suggest solutions for those obstacles

Project objective/background
In the last fifteen to twenty years, there has been an increased focus on physician burnout and wellness, and rightfully so. The medical profession has been around for centuries, however this most important aspect has been sorely neglected for most of that time. With the current global shortage of physicians, it is imperative that we find ways to keep the current physicians practicing for as long as possible, while trying to attract more individuals to the field of medicine. It is commonly known that a variety of factors contribute to physician burnout, and several solutions have been put forward to help address the situation. These include the Physician Wellness Week by the American College of Emergency Physicians, the highly controversial duty hours reform in both the USA and the UK; the wearing of color-coded wrist bands by South African doctors to indicate the number of hours worked and myriad other wellness programs. These programs usually focus on treating an already existing problem, rather than preventing it.

This article will focus on the idea of Physician Health specialists as a way for organizations to help combat the problem of burnout among their residents and physicians. There is a specialist for just about every ailment that plagues patients in our health centers. There are physicians who have special interest in diving, aviation, aerospace and wilderness medicine, among others. They attend special workshops or undertake additional academic qualifications or fellowships to qualify them as specialists in these fields. Would it not be wise to also create a new specialty that specifically focuses on the health and well-being of physicians? Who knows and understands the problem of physician burnout better than a fellow physician? For the most part, the evaluation and follow-up of the existing wellness programs are the responsibility of mentors who have been nominated or have volunteered to do so. In this article, the benefits of having dedicated, paid physicians in hospitals and the community with a special interest in preventing, identifying and treating physician burnout and developing tailor-made wellness programs will be explored.

If the medical fraternity is truly concerned about the high incidence of burnout among its members, then it needs to be more aggressive with regards to finding permanent and sustainable solutions to the problem. Creating a Physician Health sub-specialty is one way to effectively tackle this issue.

Precision initiatives: Embracing technology, preserving humanness; transforming paradigm of personalized learning by introducing a framework around "What matters to you?"

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Learning objectives
1. Introduce the concept and design of an innovational new framework around the notion of "what matters to you?" in continuing professional learning of health care professions.
2. Demonstrate how the framework design emphasizes the ownership of individualized learning to be with the learners themselves, reimagining the true notion of personalized development plans.
3. Explain how a competency and quality-based framework can help learners focus on their needs and bring personal value to their learning.

Project objective/background
Continuing professional development programs have tended to lack opportunities for learning to be individualized. Traditional methods of learning, that are often didactic, have repeatedly failed to facilitate an individual's professional growth, foster ownership of their learning or promote well-being. Precision Initiatives have been conceptualized adopting person-centred design. Precision framework design emphasizes the curriculum be based on each individual learner's needs, hence promotes the ownership of these initiatives to be with the practitioners themselves.

Methods
Precision Initiatives have fulfilled the need for personalization of learning by providing formalized & standardized opportunities for practicing health care professions to undertake programs based on their own needs, helping them attain and maintain their professional competence. The design of this program involves undertaking system level improvements, changing culture by introducing an innovative new learning contract that emphasizes identification and documentation of individualized learning needs and behavioral objectives as part of competency and quality-based curriculum and assessment.

Progress review of each learner is continuous and monitored in real-time, based on field observations documented by both the learner and the preceptor(s) through individualized electronic "precision notes". Successful completion of the program is based on achieving proficiency in all the behavioral objectives identified as part of the competency-based individualized curriculum.

Enabling technology is critical to the success of this program. We have utilized workflow automation to digitize the program entirely, eliminating resource intensiveness traditionally associated with personalized initiatives.

Formalized learner, preceptor and program evaluations are mandatory component of the program. As part of commitment-to-change learning contract, the program also introduces the concept of post-program learning reinforcement activities, offering learners opportunities in undertaking impact assessment, reflection and quality improvements activities.

Conclusion
The ethos of the program is to promote a culture of self-assessment of practice, measuring outcomes, undertaking impact assessment, thereby promoting ownership, self-confidence and personal wellbeing, as well as improving patient safety and health outcomes. When designing programs and initiatives of continuous learning, it is vital to engage learners themselves, co-creating initiatives as per their needs identified. This also helps drive implementation and adoption strategies in practice.

Promoting a culture of faculty well-being: Lessons learned from one medical school's journey

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Learning objectives
1. Describe a school leadership supported program to engage department chairs and divisions chiefs in discussions about faculty well-being
2. Describe best practices of support strategies and "pearls of wisdom" used by department chairs to support faculty well-being
3. Discuss challenges and lessons learned from this program

Project objective/background
With over 54% of physicians experiencing burnout and large numbers of faculty considering leaving academic medicine, it is crucial to address the environment in which faculty work. We describe a program to engage medical school department chairs and divisions chiefs to promote a culture of faculty well-being. We discuss challenges and lessons learned.

Methods
Between October 2015 and February 2016, we distributed a school-specific survey to assess faculty burnout, intention to leave, challenges and support desired by faculty. Beginning November 2016, we conducted five 2 hour-long small group workshops for chairs. This included a presentation of survey results, information about burnout, individual and systems approaches to faculty vitality, and a guided group discussion where chairs shared current approaches they use to support faculty well-being in their department. Support strategies derived from this collective wisdom were recorded by the facilitator and a scribe, were categorized into common themes and listed in a "best practices" document. Chairs identified the need for similar discussions with division chiefs and those began in February 2017.

Results
The chairs' workshop discussions were rich, with chairs sharing how they support their faculty amidst productivity demands, a matter not typically discussed. Pearls of wisdom and support strategies were collated into a "best practices" document and categorized as such: Expressing your leadership, building and supporting your team, helping individual faculty advance, and managing resources. We will discuss the experience of unveiling the "best practices" document at leadership meetings. Discussion sessions for division chiefs have had a different flavor: with division chiefs struggling with their own challenges, it has been more difficult to elicit a robust discussion of how they can support others. We are learning that we need an initial session to acknowledge the day to day impact of challenges on their clinical and academic work lives before proceeding in separate sessions to engage them in reviewing solutions for challenges over which they have control. We will have 6 additional months of experience to present as we continue to meet with chairs and division chiefs.

Conclusion/next steps
Providing a formal opportunity for chairs and division chiefs to discuss well-being of faculty yielded rich discussions, and a "best practices" document of support strategies. We next plan to elicit specific

solutions to targeted clinical and academic problems (those over which we have control) to present to higher school and university leadership.

Resident wellness curricula: What's out there? And who's doing it?

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Learning objectives
1. Describe the available evidence for resident wellness curricula
2. Describe content areas to impart in a curriculum
3. Describe the wellness inventories commonly used to assess curricula

Project objective/background
Physician wellness and burnout are a focus in medicine. Current literature informs us that physicians at all levels are suffering from burnout, from medical students to career faculty physicians. We performed a comprehensive literature review in search of wellness/resilience curricula for residents.

Methods
A PubMed search was executed using the following terms: resident wellness; resident wellness curriculum; resident wellness program; residency wellness curriculum; residency wellness program; residency wellness; graduate medical education wellness; graduate medical education wellness curriculum; graduate medical education wellness program. These results were sorted by relevance, the first 300 articles were reviewed, and 13 were used for in-depth review. A MedEdPORTAL search was executed with the following search terms: resident wellness; resident resilience; mindfulness; well-being; and wellness curriculum; with the health profession specialties and professional interests filters. The results (393 citations) were sorted by relevance and 8 citations were reviewed in-depth.

Results
There are few published wellness curricula for residents, and none are from Emergency Medicine programs. One curriculum included sessions on developing self-awareness, setting life goals, positive psychology, mindfulness, time management, and balancing personal and professional life. A second curriculum involved residents utilizing a self-study curriculum focusing on mindfulness. Another consisted of 3 workshops focusing on resilience, response to stress, and gratitude. A fourth curriculum involved identification of and reflection on stressful clinical events and resilience-enhancing exercises, including setting realistic goals, managing expectations, letting go after medical errors, and finding gratitude. Other articles proposed an exercise and dietary improvement program and a financial management curriculum for surgical residents.

Conclusion
There are very few published wellness curricula for residents, and little research has been performed on the effectiveness of current curricula. A wellness curriculum designed by the authors is outlined below (Table 1). A comprehensive wellness curriculum may help to foster a resilient resident workforce and combat burnout.

Rethinking individual behavioral health support at Colorado Permanente medical group

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Learning objectives
1. Participants will gain an understanding of the role of the Behavioral Health & Wellness Specialist at CPMG
2. Participants will gain an understanding of the role of the Peer Support Network at CPMG.
3. Participants will gain an understanding of the barriers, challenges, and learnings of implementing individual support programs for physicians at a mid-sized (1200 physicians) organization.

Project objective/background
Two physician suicides within a year and rising burnout rates prompted Colorado Permanente Medical Group (CPMG) to rethink access to behavioral health care for its physicians. Access to confidential behavioral health care was cumbersome and fragmented. The additional psychological burden of documentation of access to care in the electronic health record (EHR) was also a barrier to seeking care.

Methods
The position of Behavioral Health & Wellness Specialist was created to help address the need for timely and confidential access to behavioral health services within the organization, better coordination and access to behavioral health care outside of the organization, in addition to building a comprehensive program targeted at physician health and wellness. The Behavioral Health &Wellness Specialist provides confidential behavioral health care to CPMG physicians at no cost, with no documentation in the EHR, and no report out to Human Resources. CPMG also developed a Peer Support Network to provide support for physicians who don't feel the need to talk to a therapist and would prefer to talk confidentially to a physician peer.   This poster will also provide information on region wide augmenting wellness offerings such as Mindfulness Skills classes, Wellness Co-mentoring Groups, our annual wellness conference, and our local Wellness Ambassadors program.

Results
Data on behavioral health services and peer support access will be shared. Longitudinal data on burnout from the CPMG physician engagement survey will be shared. Barriers, challenges, learnings, and future plans will be discussed.

Conclusion
N/A – ongoing project. A one page handout with a list of CPMG behavioral health services and wellness offerings will be provided to participants.

Revitalizing joy: Building physician resilience and engagement through peer coaching and mentoring

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Learning objectives
1. Recognize how physician peer coaching and mentoring facilitates professional development.
2. Relate the benefits of an organizational approach to developing internal peer coaching and mentoring programming.
3. Distinguish how internal peer coaching and mentoring programs can build resilience and enhance engagement.

Project objective/background

With burnout on the rise, many physicians have lost joy in their work. Formal mentoring programs are one response, with numerous cited positive outcomes. Formal coaching in business offers similar benefits, yet few examples exist for physicians. One reason is the tremendous cost of professional coaches, who provide one sided benefit to the coachee. Hoping to capture the best of both resources as preventive support, physician leaders created a Center for Excellence in Coaching and Mentoring, whose mission is to facilitate a relationship-centered developmental network for all physicians across their career continuum. The Center has focused on training peer coaches and mentors, utilizing a unique goal-based framework founded in positive psychology. This curriculum is delivered across a variety of forums, with two main programs of focus.

The flagship Staff Coaching and Mentoring Program (SCMP) was created in 2009 to increase resilience and development goal achievement, with over 300 participants. CME peer-training differentiates roles and allows practice of coaching and mentoring skills. Ongoing training, matching assistance, resource toolkit, and networking are provided. SCMP's unique structure involves a coach and coachee primary relationship. Coaches encourage self-reflection, expand options, and create accountability without advisement. Coachees access a network of Mentors, who provide goal-specific expertise.

To provide more advanced coaching for peers approaching the executive level or those at-risk, the Advanced Peer (AP) Coaching Program was launched in 2015. AP Coaches train in a four day immersion into the goal based framework with ongoing development, with over 100 participants.

Results

SCMP qualitative and quantitative outcomes show a significant impact on components of resilience and engagement and application of the skills learned across contexts. Coaches/Mentors reported equal increases as Coachees/Mentees. Unmatched participants reported benefits, suggesting that training alone has a positive impact. Results of the APCP are being collected and will be presented.

Conclusion

Peer-based coaching and mentoring initiatives provide dual benefits to the organization by increasing engagement and resilience of *both* recipients and Coaches/Mentors. These initiatives present a unique opportunity to revitalize joy by facilitating developmental networks for physicians, and deliver valuable coaching skills that can be used in daily interactions across contexts.

Self-compassion training for physician well-being

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Learning objectives
1. To recognize the importance of self-compassion as a mediator of resilience and as a (negative) predictor of physician burnout.
2. To be able to describe key components of a self-compassion training program for physician well-being
3. To identify barriers and facilitators to implementing a self-compassion training program for physician well-being

Project objective/background
Physicians are suffering from burnout on an unprecedented scale. Low self-compassion appears to predict burnout and may be an important target for training. Current programs that employ contemplative practices to promote physician well-being typically feature mindfulness meditation and, while beneficial, have substantial time, practice, and travel requirements that limit scalability to the many physicians experiencing burnout.

Self-Compassion Training for Physician Well-Being is a program designed for the convenience of participants by delivering very brief self-compassion teaching sessions and exercises to pre-existing practice groups in the clinic setting during the workday. Emphasizing the mindset of self-compassion, exercises are designed to mediate self-kindness and self-care in stressful situations. An initial pilot showed significant improvements in measures of self-compassion and the skills taught in the program. A second pilot, presented here, was conducted to refine the program based on participant feedback from the first pilot including: (1) exclusive focus on self-compassion; (2) reviews of skills taught in earlier sessions; and (3) inclusion of more advanced practices.

Methods
Physicians were enrolled as pre-existing practice groups, rather than individuals. A 45-minute orientation was followed by eight weekly 30-minute skill-building sessions. Guided self-compassion exercises were presented over 7–10 minutes and then repeated as a condensed 3-minute version to reduce the time needed to access target effects. Cards designed as visual triggers and online recordings were provided to support practice. Participants completed pre- and post-intervention surveys of self-compassion and burnout, and of self-efficacy regarding skills taught in the program.

Results
Physicians (n = 12, 83% women) from 2 primary care clinics participated in the second pilot; of these, 11 of 12 (92%) completed the program with 78% overall attendance. Preliminary data analysis suggests that the 9 of 11 (82%) participants who attended over 50% of sessions experienced significant improvement ($p<0.05$) on the 4-item self-compassion section of the Stanford Physician Wellness Survey, but not on the 12-item Self-Compassion Scale – Short Form. Definitive analyses of these data and the results of burnout and self-efficacy measures are pending.

Conclusions
A self-compassion training program, designed around convenience for physicians, brief just-in-time exercises, and a mindset of self-kindness and self-care, is feasible and promotes scalability by reducing

barriers to participation. This approach appears to improve measures and skills of self-compassion, an attractive and potentially powerful focus for physician well-being interventions.

Shifting the culture of medicine to foster resilience across the lifespan: Practical solutions

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Learning objectives
1. At the conclusion of the presentation, participants will be able to recognize the strengths and weaknesses inherent in the personality traits of candidates typically selected for medical school.
2. At the conclusion of the presentation, participants will be able to identify medical school curricula that will empower students to access mental healthcare and engage in health promoting practices.
3. At the conclusion of the presentation, participants will be able to discuss practical solutions to positively engage physicians across the lifespan in stress-reducing activities and support networks.

Project objective/background
In keeping with a culture that values high intelligence, conscientiousness, and commitment, the medical profession recruits and selects individuals with some degree of obsessionality and perfectionism at the core of their personalities. Indeed what would fit criteria for Obsessive Compulsive Personality Disorder (OCPD) in non-physicians is practically the norm in physicians themselves. With personality disorders defined against the culture in which they occur, doctors would not even consider run-of-the-mill OCPD to be pathological! The traits central to the OCPD diagnosis -- while adaptive for academic success -- simultaneously create vulnerability in physicians who attempt to live up to the unrealistic expectations of being everything to everyone, e.g., by working while sick, not admitting failure, not seeking mental health services, and being productive at the expense of personal time and leisure activities (including physical exercise). However the most resilient and least "burned out" doctors appear to be those who are able to set limits at work in order to have time for leisure activities and loving relationships, who accept their imperfections and acknowledge mistakes, and who find joy and meaning in their daily work. Medical institutions increasingly recognize the problem of physician burnout, which leads to compromised patient care and increased turnover, but most must do more to foster resilience among student and doctors throughout the lifespan of their training and career.

Methods
We reviewed the literature for evidenced-based interventions that were designed to reduce burnout and foster resilience among doctors across the professional lifespan (pre-medical education; medical school; residency/fellowship; early career; mid-career; late career/retirement) for the purpose of creating guidelines to foster resilience throughout a physician's lifespan for use in academic institutions and medical centers.

Results
We will present curricula and guidelines for pre-medical education, medical school, residency, early/mid/late career intended to change the culture of medicine and better foster resilience These concepts will be interwoven within Dr. Worley's accessible and memorable nautical metaphor. Consistent themes from the literature include the need for both individual (e.g., promotion of exercise, sleep, nutrition, mindfulness, biofeedback, and cognitive behavioral strategies) and organizational (e.g. to allow

for meaningful work, better control over the practice environment, decreasing unnecessary regulations) efforts and fostering authentic connections at work including mentoring, coaching, and support networks. Decreasing stigma around admitting vulnerability and providing safe ways to access mental health treatment are also seen as critical. There remain a relative lack of randomized controlled trials and longitudinal data. Major hurdles include implementing interventions during working hours, particularly for medical students and trainees.

Conclusion
Funding large-scale, multicenter longitudinal studies that track resilience across the lifespan from pre-medical education until retirement and creating forums to share ideas across institutions may foster development and refinement of strategies to shift the culture of medicine in favor of self-care and resilience. Interventions should be tailored for the developmental stage and use of the nautical metaphor can be instructive for identifying key problems and their solutions to bring about meaningful change, replenishment and rejuvenation.

State physician health programs: Your partner in physician wellness

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Learning objectives
1. Describe the history and purpose of state Physician Health Programs
2. State the personal and professional wellness benefits experienced by Physician Health Program participants.
3. Illustrate the advantages of partnering with your state Physician Health Program on wellness initiatives.

Project objective/background
Physician Health Programs (PHP's) were born out of the physician health movement that began in 1973 with the seminal publication, The Sick Physician, by the AMA Council on Mental Health. Recognizing that physicians are vulnerable to illnesses that afflict all humans, state PHP's were developed as a therapeutic alternative to discipline for physicians and other health professionals who were suffering from potentially impairing health conditions. Given this developed experience and expertise in physician health, PHP's across the nation have been called upon by health care and professional organizations, medical societies, licensing authorities, medical schools and graduate training programs to provide education on physician wellness and burnout and to assist in developing wellness initiatives.

This poster presentation will share data from WPHP annual and exit surveys that illustrate the improvements in personal and professional outcomes reported by PHP program participants. Examples of how healthcare organizations and PHP's can partner in building a foundation of workplace wellness will be presented.

PHP's, which operate in 47 states, including the District of Columbia, are ready and able to assist organizations in creating foundations to achieve joy in medicine. At the conclusion of this presentation, participants will have a greater understanding of what PHP's have to offer and how their wellness initiatives can be advanced through partnerships with their state PHP.

Surgeon burnout: Creating a wellness curriculum to support general surgery residents in self-care and burnout prevention.

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Learning objectives
1. Define and measure burnout as it pertains to surgery residents.
2. Describe components of a novel general surgery resident wellness curriculum.
3. Identify barriers to implementation of a general surgery resident wellness curriculum

Project objective/background
A growing body of evidence recognizes residency training as the nadir of personal wellness in a physician's career. A recent study demonstrated that over 50% of residents screened positively for depression and 60% screened positively for burnout. Resident burnout is receiving increased attention by the Accreditation Council for Graduate Medical Education (ACGME). Though widely recognized as problematic, it is not well understood in surgical training. There are a number of unique challenges within a surgical residency program that may contribute to these conditions, including longer duration of training compared to other specialties, ingrained hierarchy, dealing with poor surgical outcomes and large accumulated debt. A formal wellness curriculum is necessary to promote and sustain a culture in which to educate, empower and inspire surgical residents to care for themselves during the rigorous training that prepares them to care for others.

Methods
We conducted a needs assessment of our current residents to determine their perception of wellness and help inform a novel curriculum. This was performed via an anonymous survey and followed up with three, hour –long "round table discussions" facilitated by a surgery attending wellness champion and departmental clinical psychologist.

Results
Eighty – three percent of respondents stated that our program did support culture of wellness; 65% responded that they would benefit from a formal wellness curriculum. Based on comments from the survey and discussion, a number of themes were identified. Barriers to wellness included the electronic medical record as well as excessive administrative tasks. Contributions to personal wellness included rewarding patient care experiences, gratitude from patients and colleagues and ongoing learning and improvement in skills acquisition. Residents also expressed that they generally prefer experiential, rather than lecture-based, content.

Conclusions
Based on the information gleaned from the residents we aim to create a year-long experiential based curriculum that will be incorporated within their training program. The aim of this structured curriculum is to ultimately lead to an environment where burnout is preventable. We expect that the lessons and skills gleaned from the program will be incorporated into independent post-graduate practice. On a broader scope, we anticipate that the effects of the program will eventually improve patient and family

satisfaction, enhance quality of care and esprit de corps, as well as reduce medical errors and healthcare costs. Barriers to a successful curriculum include identifying objective tools for wellness assessment over time well as prioritization of attending wellness to support promotion of the resident curriculum.

The less clicks the better: Improving the documentation workflow process for physicians

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Learning objectives
1. Understand how process improvement methods can empower physicians to improve workflows
2. Apply usability testing to understand the physician EHR user experience, and how to improve upon it.
3. Utilize EHR tools to document more efficiently, thus saving time for direct patient care

Project objective/background
One of the five pillars of the Southern California Permanente Medical Group, SCPMG, addresses improvement of work flow efficiencies. With the adoption of the Electronic Health Record physicians have an increased burden of documentation, and work dissatisfaction. Process Improvement methodologies can be applied to common practices to provide more efficient and satisfactory workflows. Front-line physicians can utilize these methodologies to make an immediate impact in their daily workflows. Alleviating the burden of documentation will allow physicians more time to connect with patients and shorten their work day.

The present group note documentation process, in the Department of Addiction Medicine at Kaiser Permanente, is time-consuming, and there is no uniformity in how the physicians accomplish this task.

The objective of the project was to deliver an EHR tool to improve and standardize the documentation process. The EPIC EHR platform offers a documentation tool known as a "SmartSet," which is a documentation template. This enables physicians default selections, which reduces data entry time, and increases uniformity of the document.

Methods
Usability testing, and Agile system development models were utilized. Measurements were taken pre- and post- SmartSet implementation to measure physician's satisfaction for the process (scale of 1-5 with 5 being highest satisfaction), how many clicks and keyboard stokes used, and amount of time it took to close one chart. Physicians were asked if they would adopt the new process, which was thought to be an indication of workflow satisfaction.

Results
SmartSet workflow revealed a decrease in documentation effort of 37 – 72% for mouse clicks and keystrokes, and 18 – 35% decrease in total documentation time. Satisfaction for the documentation process improved from a score of 2.75 (on a scale of 1 -5 with 5 being highest), to a score of 4 with the new process. All of the participating physicians said they would adopt the new workflow process.

Conclusion
The Physician Wellness program at SCPMG empowers physicians to participate in management of their own practice. Using process improvement methodologies to design, and streamline their own workflows

can help improve documentation burdens of practice, and lead to improved physician work-life satisfaction.

Wellness, inclusion and quality: A systems approach to supporting physician resilience

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Learning objectives
1. Evaluate one institution's effort and lessons learned in forming an institutional resilience program
2. Identify how a focus on equity and inclusion can support wellness and further resilience, both personal and institutional.

Project objective/background
An interest in resilience among health care professionals continues to rise as burnout rates climb. Focusing on the individual, whether by providing mindfulness or resiliency training, encouraging healthy lifestyle, or access to mental health services, is important, but in the absence of a system wide approach may not be sufficient. We have expanded our efforts to understanding the institutional factors related to provider burnout and a diminished satisfaction with medicine as a career choice.

Methods
University of Utah Health (UUH) has undertaken a comprehensive approach to optimal wellbeing among its trainees, faculty and staff. Initial data gathering of burnout and faculty wellbeing in the School of Medicine (SOM) was accomplished via the American Medical Association (AMA) - American College of Physicians Wellness Pilot, using the AMA's validated Mini-Z and demonstrated faculty burnout rates similar to the national average at 30%. These data coupled with the institutional commitment to quality fueled the SOM departments to identify areas of strength and opportunity, select Wellness Champion(s) charged with developing programs to meet wellness priorities with reportable metrics, and commit to annual Mini-Z assessments. Programs range from personal wellness and resilience to clinic flow, teamwork facilitation and flexible work schedules. Champions meet quarterly to assist in their program development and implementation.

Deepening our understanding and commitment to inclusion as essential to wellness, our Associate Vice President for Equity and Inclusion has provided a unique and important perspective to our wellbeing effort. Among other programs, we collaborated on a weekly Community Read during Spring 2017 on the topic of the science of wellness, exploring the relationship between inclusion, wellness, and quality.

The University of Utah Resiliency Center was established in 2017 as an overarching structure to support synergy and collaboration among the many existing faculty/staff wellness initiatives and coordinate closely with UME and GME wellness efforts. The Center will have the capacity to build new resources and create a hub to serve as a crucible for new ideas.

Conclusion
A system level approach to wellness and resilience allows both a focus on supporting individuals while reducing burden that contributes to burnout. Targeting students, trainees, faculty and staff contributes to an inclusive culture of wellness that supports quality.

Addressing effects of adverse clinical events in physicians: An opportunity to reduce burnout

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Learning objectives
1. Describe the second victim phenomenon
2. Describe the impact of adverse clinical events on physicians
3. Practice a Peer Support Tool

Project objective/background

Adverse clinical events are common in medical professionals' experience. Often referred to as second victims, these providers' experiences often lead to burnout. Many physicians do not feel that they receive adequate emotional support from their colleagues and leaders following such adverse events. Quality of patient care, patient satisfaction, and provider satisfaction all suffer following an unsupported adverse clinical event, and burnout may result in turnover, which results in both direct and indirect costs to healthcare systems.

Objectives

A Peer-to-Peer Support Network Program was developed at our large academic medical center. The program consists of training for clinical providers to provide peer support to colleagues following adverse clinical events. We assessed our participants' perceptions of adverse clinical events prior to intervention.

Methods

At baseline, participants completed the Second Victim Experience and Support Tool (SVEST), which was developed for healthcare organizations to evaluate providers' second victim experiences, and desired forms of support. SVEST domains (See Table1) are scored such that higher scores are "negative" and associated with negative outcomes such as absenteeism and turnover intent. Stepwise linear regressions were conducted to ascertain most salient predictors of Turnover Intent (TI) within each of the two samples.

Results

The Pediatric (N=74, Female 71.6%) and Adult (N=39, Female=41%) Physician samples were compared on SVEST domain scores and desired forms of support. There was no difference on level of TI between the two groups. Notably, the pediatric sample did endorse higher overall Second Victim Distress compared to the adult sample, citing higher psychological and physical distress (p's < .05). In our pediatric sample, TI was predicted by Physical Distress (p<.001) and perceived Institutional Support (p=.032). In the Adult sample, TI was predicted by Perceived Self-efficacy and perceived Institutional Support. Both groups rated being able to "talk to a respected peer" as the most desirable form of support.

Conclusion

Consistent with previous SVEST results (Burlison et al, 2016), associations between TI and perceived Institutional support were inverse. That is, those with higher TI have lower perceived institutional support. In our sample, results suggest that, when considering predictors of TI, sources of distress may

differ depending on the roles of and population served by physicians. Systematic Peer-to-Peer Support training intervention may be especially helpful in enhancing provider well-being. Although our pilot sample sizes are small, further addressing second victim experience and providing institutional and peer support may mitigate burnout in health care providers.

An economic evaluation of the cost of physician burnout in the United States

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Project objective
To estimate the annual cost associated with physician burnout in the United States and to develop a methodology for individual healthcare organizations to estimate their institution-level costs associated with physician burnout.

Design and Setting
A decision tree was used to model the relationship between two productivity-related outcomes (leaving the medical profession and reducing clinical hours) and one clinical outcome (medical errors) that have been found to be associated with burnout. Input transition parameters for the tree were calibrated using statistics extracted from published studies, and, where applicable, re-analysis of primary data from published studies. Input cost parameters were calibrated using from a combination of results from published studies and analysis of industry benchmarking reports. Univariate and probabilistic multivariate sensitivity analyses were used to assess the robustness of the results to uncertainty in the input parameters.

Main outcome and measure
Annual cost attributable to physician burnout in the United States.

Results
The base-case model estimates that $3.4 billion per year in the United States is attributable to physician burnout. The largest proportion of this cost (79 %) is attributed to the cost of physicians leaving the medical profession. In sensitivity analyses, this estimate ranged from $2.9 billion to $5.0 billon.

Conclusion and Relevance
The economic burden of physician burnout is substantial at a national level. Together with previous evidence that effective burnout reduction can be achieved with moderate levels of investment, the results of this study can inform health policy at the national level and managerial decision-making at the organizational level, and suggest that it can be economically worthwhile to make policy and organizational investments in such burnout reduction programs.

Assessing operating room workplace culture and identifying targets to enhance engagement and create a positive learning climate

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Learning objectives
4. Define characteristics of a highly-engaged workplace culture and a positive learning climate.
5. Examine workplace behavior survey findings obtained from a large, academic operating room setting
6. Identify factors that detract from an engaged workplace and positive learning climate in order to target solutions

Project objective/background
Anyone who has ever stepped foot into an operating room has created a story through her or his perceptions, grouping and classifying values, behaviors, relationships, and experiences. For those who work regularly in an operating room, these values, behaviors, relationships, and experiences comprise their *workplace culture.* A positive operating room workplace culture can be defined as one with values and behaviors that promote self-care, personal and professional growth, and compassion for ourselves, our colleagues and our patients. A negative one naturally detracts from these values and behaviors.

Burnout and its converse, engagement, are important concepts for workplaces to consider, as key performance outcomes such as profits, productivity, efficiency, and patient safety have all been linked to workplaces with high engagement. Historically, burnout prevention and treatment programs have focused on increasing personal resilience through approaches such as mindfulness training, cultivating meaningfulness of clinical work, enhancing emotional intelligence, minimizing sleep-related impairment, and encouraging work-life balance. These are valuable strategies and should be encouraged and modeled by leaders. However, it is just as important that we start to look at work environment and workplace culture as equally important drivers of burnout as individual attributes.

Methods
The purpose of this study was to quantitatively and qualitatively assess the workplace culture of a 21-operating room subdivision at a large academic center. Adapted from the Minnesota State University Workplace Behavior Inventory, our 66-question survey assessed organizational (within the operating room) experiences, personal experiences, physical and emotional well-being and overall satisfaction, and work behaviors, including incivility, disruptive behavior, and negative acts. Easily-defined distinctions, including gender, age, role (RN, scrub technicians, anesthesiology trainee, surgical trainee, attending anesthesiologist, attending surgeon), and length of time (on a weekly basis and in months-years) were used to assess the effects of generational, gender, interspecialty and interprofessional differences.

Results
236 participants (nurses, anesthesiology trainees and faculty, surgical trainees and faculty) completed the survey. This poster/oral presentation will identify theories and research pertinent to assessing the

workplace culture of the operating room, including workplace civility, emotional intelligence, and gender issues; additionally, results from the survey will be shared (please see attached powerpoint for partial results).

Finally, this poster/oral presentation will identify potential solutions to factors detracting from a positive workplace culture: conflict management training, with particular attention to gender and generational tensions; identifying standards of workplace civility during orientation of our workplace's newest members, and re-orientation for our more seasoned members; and, finally, establishing a vision (through behavior as well as videos, pamphlets, and posters), with the support of nursing and physician leadership, to create a workplace where employees are physically, emotionally, and professionally healthy.

Assessing the need for culturally competent medical student wellness programs

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Learning objectives
1. To report the prevalence of depression in Asian American medical students
2. To evaluate the types of coping methods utilized by Asian American medical students
3. To assess the need for culturally competent wellness programs to promote physician well-being

Project objective/background
Given that medical students will ultimately become physicians, it is of concern that medical students are at a high risk for depression (Rotenstein, 2016). To develop a culture of wellness in the physician population, medical educators must develop a culturally competent understanding of medical student wellness. Thus far, much of the conversation on wellness focuses on the general medical student population. According to the most recent AAMC survey, 20.87% (18,430/88,304) medical students identify as Asian. Little is known about the wellness needs of specific medical student populations. The aim of the study was to report the prevalence of depression in Asian American medical students and assess the need for culturally specific wellness programs.

Methods
The authors invited Asian American medical students to participate in a survey in February and March 2017. Students completed an anonymous online questionnaire assessing the prevalence of depression (PHQ-9) and stigma of mental health care. Additionally, the authors obtained student demographic information to investigate variations in rates of illness. All surveys assessed symptoms of depression, coping mechanisms, and stigma.

Results
From the schools we contacted, 498 Asian American medical students responded to our survey. Prevalence of moderate to severe depression was 19.6%. While 13.3% of students had been diagnosed as depressed, 47% of students indicated that they have felt "seriously depressed even if not diagnosed." Women were more likely to have sought out treatment for depression than men (29.5% vs. 19.1%). Men reported the use of recreational drugs more than women (9.6% vs. 3.5%). With respect to wellness culture, when students were asked if they get the help and support they need from their medical school, 41.4% (206/498) of the medical students said they were not getting the support they needed. When prompted with "If I were depressed, I would not feel embarrassed or ashamed," 15.1% (75/498) agreed.

Conclusion
Insight into the prevalence of depression in the Asian American medical student population and the factors that may influence them provide critical information for medical schools as they develop culturally competent wellness programs. The disparity between students who feel seriously depressed and students who have been diagnosed as depressed as well as the stigma associated with depression speaks to the need for more culturally competent wellness programs. The different ways that Asian American men

and women medical students cope speaks to the need for different approaches to meeting their wellness needs.

"Authentic connections groups" for medical professional mothers

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Learning objectives
1. At the conclusion of the presentation, participants will be able to describe how physician mothers are at increased risk of stress and burnout.
2. At the conclusion of the presentation, participants will be able to identify the Authentic Connections Groups: Session Topics and messages subsumed.
3. At the conclusion of the presentation, participants will be able to discuss underlying mechanisms that may foster resilience among medical professional mother participants of "Authentic Connections Group" intervention.

Project objective/background
We previously demonstrated significant and sustained benefit in measures of depression, parenting stress, global symptoms, self-compassion, feeling loved, and the personal accomplishment subscale of the Maslach Burnout Inventory, as well as reduction in cortisol levels, associated with a 12-week facilitated support group for physician and advanced practitioner mothers (Authentic Connection Groups) at Mayo Clinic Arizona, compared to a control group[1]. We now present qualitative data gathered during the trial, with the dual aims of (a) illuminating underlying mechanisms (i.e., processes explaining why this intervention "worked"), and (b) inspiring both replication studies and wider dissemination of this intervention in other healthcare communities.

Methods
Qualitative data was gathered from ACG participant's mid-point, immediately following, and 1 year post-intervention. Questions included:
1. In what ways have you found these groups helpful?
2. What suggestions do you have for us to improve them?
3. On a scale from 1-10, how likely is it that you would recommend these groups to other mothers working at Mayo (1 not at all, 10 definitely)?
4. If you would recommend these groups to other Mayo moms, how would you explain their value?

Results
Themes consistently included feeling supported and validated; learning from each other, feeling empowered to take time for self and set limits, being inspired to develop sustained connections and ongoing support networks, and appreciation for the group facilitator (i.e., recognition that the group would not have been as powerful without her presence and skillset). A minority of the physicians wanted only physicians in the group. Most appreciated the groups being held during work hours. None of the participants stopped attending the groups despite their busy schedules; they all felt it worthwhile and would recommend to others. One year post-intervention, the prevailing theme was gratitude for having had a safe place to speak up about a range of topics resulting in empowerment to make positive changes and "take control of things they felt they couldn't control." Thus, most found that they still benefitted one year later whether or not they continued meeting informally. A subset continued to meet together without the facilitator but it became more difficult to sustain and there was a sense that an occasional "booster" with the facilitator would have been useful.

Conclusion
These facilitated support groups filled a previously unmet need among physician and advanced practitioner mothers. The availability of facilitator training and supervision, future larger scale replication studies, and implementation at other healthcare institutions are important next steps. This program may be a viable preventive intervention to mitigate burnout and stress among professional women who work as physicians, nurse practitioners, and physicians' assistants, even as they negotiate the considerable demands and challenges that come with their roles as mothers.

1. Luthar SS, Curlee A, Tye SJ, Engelman J, Stonnington CM. Fostering Resilience Among Mothers Under Stress: ''Authentic Connections Groups'' for Medical Professionals. Women's Health Issues (in press) 2017.

Awareness of bullying in internal medicine residencies: Results of a national survey of internal medicine program directors

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Learning objectives

1. Participants will learn about the definition and prevalence of bullying in medical education
2. Participants will hear about the presumed prevalence of bullying in Internal Medicine (IM) residencies according to IM Residency Program Directors.
3. Participants will be able to identify the most common types of bullying occurring in residency training and those who are most typically the perpetrators

Project objective/background

Bullying in medical education has been described as a significant and ubiquitous problem in studies of residents and medical students. American and international studies cite upwards of 50% of trainees reporting experiencing bullying, most commonly in the form of verbal putdowns or attacks. Being bullied creates psychological pressure which can lead to mental health consequences including depression, anxiety, and post-traumatic stress disorder. The authors conducted this study to describe perceptions of internal medicine (IM) program directors about the bullying of their IM residents.

Methods

The 2015 Association of Program Directors in Internal Medicine (APDIM) annual survey was sent to 368 program directors (PDs) with APDIM membership, representing 93% of the IM residency programs. To learn about IM PDs' perspectives and awareness about bullying in their programs, questions about bullying were included in the annual survey. Bivariate analyses were performed on PD characteristics and program characteristics.

Results

227 PDs (61.6%) responded to the survey. Less than one third of respondents (71/227, 31%), reported being aware of bullying in their residency program during the previous year. There were no significant differences between those reporting bullying in their programs and those who did not when gender, tenure as PD, geographic location, or specialty of PD were considered in the analyses (all $p>0.05$). Those who acknowledged bullying in their program were more likely to agree that bullying represented a significant problem in graduate medical education ($p<0.0001$), and that it had a negative impact on the learning environment ($p<0.0001$). The means for reporting bullying vary widely across training programs.

Conclusion

Most IM PDs believe that bullying does not occur in their training programs. Because bullying is thought to negatively affect the learning environment and threaten the well-being of trainees, program directors may need to more proactively assess its actual prevalence. Programs that both identify each episode of bullying and establish a zero tolerance policy will be more able to support physician health and wellness.

Balance in life: Feasibility of one wellness program within surgical residency

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Learning objectives

1. To chronicle the development of a wellness program for surgical residents
2. To describe key elements of our wellness program
3. To assess residents' self -evaluations of burnout as well as their preferences for improvement and utilization of our wellness program

Project objective/background

Surgical training is an intense period which can negatively affect trainee quality of life. Our residency program implemented a *Balance in Life* program designed to improve residents' psychological, physical, social, and professional well-being. The program consists of six components: a refrigerator stocked with healthy foods, group sessions with a psychologist, social events, a resident mentorship program, a class representative system, and an *After Hours Guide.* The purpose of this paper is to describe the development of the program as well as its key elements. In addition, resident assessments of burnout as well as their involvement in program improvement and utilization is evaluated.

Methods

In a paper-and-pencil survey, 21 general surgical residents were asked to propose changes within the residency program, the wellness program, and their own behavior which would improve their overall quality of life. They were also asked to rate their level of burnout. In a separate survey, 56 residents were surveyed on their perceived value of various wellness program components. Means and standard deviations were calculated for overall responses, as well as by gender and PGY-level.

Results

Mean self-evaluation of burnout for all residents was 4.1 (scale 1-10). When examined by PG level, first- and third-year residents rated themselves as being most burned-out (Mean = 7.0 and 7.3, respectively) compared to second-year residents who rated themselves most positively (Mean 2.5). Suggestions for improvement in the wellness and residency programs focused on concrete efforts to increase or enhance protected time, faculty feedback and financial incentives. Suggestions for improvement in residents' own behavior emphasized physical lifestyle changes such increasing exercise or sleep. The most valued components of the program were the refrigerator (mean=1.39) and the group sessions with a psychologist (mean=2.42), followed by social events (mean=2.52), the Resident Mentorship Program (mean=3.21), the Class Representative System (mean=3.38), and the *After Hours Guide* (mean=3.90).

Conclusion

This study demonstrates that a multi-faceted program to improve the well-being of trainees is feasible and positively perceived by the residents. Self-evaluations showed that residents overall perceived themselves as moderately burned-out with PGY levels 1 and 3 being at most risk. Residents' suggestions for improvement in their own lives and within the program focused primarily on concrete changes such as increases in resources or physical improvements. Further attention is needed to incorporate resident

suggestions into our wellness program and to better understand how we may tailor its components to better serve residents by PGY level.

Breaking in the emergency department: EM culture represents a barrier to self-care

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Learning objectives
1. To understand the role of EM culture in presenting barriers to self-care on shift.
2. To understand the effects of poor self-care on physician well-being and patient care.
3. To understand the role of faculty physicians in promoting a culture of resident self-care.

Project objective/background
Self-care using rest breaks to optimize performance has been associated with fewer errors in a range of industries. Aspects of EM practice culture make residents feel negatively judged for practicing self-care. These cultural beliefs are concerning given the alarming burnout rates in EM, and the high cost of medical error. Our objective was to investigate EM's existing culture around breaks for self-care on shift.

Methods
We conducted and digitally recorded 4 separate focus groups during an annual retreat with 60 EM residents from a single program. Moderators received training in focus group dynamics and used 8 structured questions representing a priori themes. Moderators were faculty known to the residents. Post-transcription coding was completed manually by pawing and the cut-and-sort method. Transcripts were analyzed separately by the PI and 2 peers. Team analysis then resulted in consensus on 5 main themes which were confirmed by participant validation.

Results
5 main themes were uncovered in the data:
1. There is a culture of poor self-care in EM, and this presents barriers to effective resident self-care.
2. Residents frequently experience hunger and thirst on shift and this negatively affects cognitive function and emotional self-regulation.
3. Residents are concerned with the potential for negative patient outcomes when they take breaks for self-care however actual occurrences are rare and can be avoided by appropriate communication with peers, faculty and nursing.
4. Opportunities for self-care on shift need to be flexible and individualized.
5. Residents require cultural change and tacit permission in order to engage in self-care.

Conclusion
There has only been a single previous study on resident breaks in the ED, and it did not elicit cultural barriers to self-care. The internal nature of our breaks initiative led us to not select external moderators initially, which was a source of bias. Upon review it was felt the results were generalizable and of interest to a wider audience. Cultural change in EM is required to empower self-care behavior among resident physicians working on shift. Self-care behavior initiatives must build in flexibility, safety and ED specific communication strategies.

Build it and they will come: Fostering resilience and professional engagement among academic hospitalists

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Learning objectives

1. Examine the importance of identifying needs and values within one's current working environment at individual and organizational levels.
2. Explore how an academic hospitalist group introduced programs designed to support and benefit physicians by incorporating engaging activities into current schedules.
3. Acknowledge a thriving work-life involves both professional and personal growth.

Project objective/background

Academic hospitalists balance research, academic creativity, self-directed learning, and teaching activities with the daily work of providing care to acutely ill patients. These demands require a high level of individual commitment that can lead to stress and burnout, including disengagement from clinical care, increased turnover, increased medical errors, and lower patient satisfaction. Addressing the root causes of burnout is necessary, but also a time- and effort-intensive undertaking. Therefore approaches to wellness interventions need to be creative and tailored to high value for maximal dissemination and adoption. The following describes how an academic hospitalist group adopted this high-value approach to wellness by transforming weekly meetings to include wellness interventions with low time-cost and high impact for physicians and their larger practice group.

Methods

Hospitalist leadership designed three 6-month pilot programs to address professional and personal growth. The pilots were entitled the 15-min CME, a short peer-to-peer educational session; the Support the Doc Series (SDS), an informational series for hospitalists on topics related to academic promotion, benefits at the university, and the business and operations of medicine and health care; and Balint Groups for Hospitalists (BGH), a facilitated group session for reflection on clinical cases. Each program was a monthly series that coincided with one of the weekly scheduled hospitalist meetings. All hospitalists were invited to attend; however, hospitalists who were on service at that hospital for the week were the primary participants.

Results

Participants were asked to evaluate each session of each series by responding to open- and closed-ended items assessing the level of usefulness of individual activities. Of 35 responses, 83% of participants agreed that the BGH was a good use of time. All 36 responding participants in the SDS series agreed the presentations were a good use of time. The 15-min CME series also received positive reviews. Participants valued aspects of sessions that supported career advancement, including that peer-to-peer evaluations were added to the presenter's academic dossier and that presentations could be converted into submissions for publication to the university's online journal.

Conclusion

Developing programs to enhance personal and professional growth are valued when they respect the time demands of group members and address root causes of stress and burnout. This study suggests that adapting interventions to existing meetings may reduce perceived costs and maximize satisfaction and acceptability.

Characteristics and themes from utilization of a clinician peer support program at an academic medical center

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Learning objectives

1. Illustrate key demographic variables that help analyze utilization of a peer support program.
2. Characterize sources of referrals, event types, and clinicians involved in a peer support program.
3. Identify themes that emerge in the process to improve a peer support program.

Project Objective/background

The objective of this project is to analyze peer support encounters after the first two years of program implementation to determine utilization and identify areas for greater resource allocation. After an adverse event, clinicians are at risk for becoming "second victims" and experience predictable stress behaviors. While clinicians may access the Employee Assistance Program (EAP) at their institution, rarely do they utilize this service. A robust peer to peer support program is necessary to help strengthen personal resilience especially during vulnerable times in a clinician's career.

Methods

In June of 2015, a peer support program entitled "Care for the Caregiver" was launched at Christiana Care Health System, an 1,100 bed not-for-profit academic medical center in Newark, Delaware. The team includes attending and resident physicians, nurses, and chaplains trained in providing emotional support to second victims. The program is available to any hospital system employee or medical-dental staff member. Peer supporters were asked to complete a data collection form after each encounter to document non-protected health information aspects of the encounter including clinician role, type of event, location of triggering event, referral source, level of satisfaction, length of encounter, subsequent referral to third party resources, and suggestions for improvement. This data was analyzed to determine utilization characteristics and themes using qualitative methods over the first two years of implementation.

Results

Peer supporters recorded 244 encounters. Supported clinician roles included attending physicians, resident physicians, nurses, physician assistants, nurse practitioners, respiratory therapists, constables, pharmacy technicians, and patient care technicians. Types of events included adverse events, litigation, staff death, and workplace violence. Location of events included the emergency department, intensive care unit, inpatient floor, obstetrical unit, operating room, and outpatient office. Referral sources included colleague, supervisor, risk management, and self. Average level of satisfaction on a 1 to 5 rating scale was 4.25. Most encounters were completed in less than fifteen minutes. 17 encounters required subsequent referral to third party resources such as employee assistance programs or a mental health provider. The themes of time constraints and depth of support emerged from the suggestions for improvement.

Conclusion

The characteristics and themes of this peer support program informs further development of peer support programs. A peer support program creates a strong message that an institution cares for its clinicians and helps promote personal resiliency.

Evaluation of a formal wellness curriculum to reduce burnout in anesthesia residents: A pilot study

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Learning objectives

1. Describe the signs and symptoms of burnout in self and others
2. Identify necessary resources at their home institution to create a supportive infrastructure for a wellness program.
3. Describe best practices when developing a wellness curricula.

Project objective/background

Among physicians, long-term exhaustion and chronic occupational stress often result in burnout, which has the potential for long-term sequelae to patients and self. One approach to reducing physician burnout is offering a formal curriculum that emphasizes resilience strategies. Instruction in active coping and social support has been found to help anesthesia residents maintain well-being in both their work and home environments, thus supporting the potential effectiveness of a wellness curriculum with this population (Saadat et al., 2012).

Methods

Out of 45 Anesthesiology residents at the University of Colorado, 43 enrolled in this IRB approved study. All residents could experience the wellness curriculum regardless of enrollment in the study. The data were de-identified, and had no impact on standing in the residency program. The residents were asked to complete the Maslach Burnout Inventory (MBI) at three time points over the year and indicate how many wellness events they had attended via an email survey. Each wellness event was evaluated. The three major components of the curriculum included: grand rounds presentations, quarterly resident wellness group meetings, and quarterly didactic sessions during protected teaching time.

Results

Data were analyzed using descriptive statistics, bivariate analyses, and a multi-level mixed effects model assessing the influence of the different curriculum components as well as time on the trajectory of the three MBI subscales.

Conclusions

Residents showed high levels of emotional exhaustion (Mean 29.8; SD 10.1), personal accomplishment (45.6; 6.3), and depersonalization (13.1; 4.9) at the start of the curriculum. Personal accomplishment was the only scale that showed a significant increase over time ($p<0.031$). Among the three major components of the wellness curriculum, resident wellness group sessions were the most highly associated with a significant decrease in depersonalization ($p=0.001$) and a trend toward decreasing emotional exhaustion ($p=0.073$). Although the improvement in emotional exhaustion did not reach statistical significance, the power to detect a difference was necessary limited by the number of residents in the program. Neither workshops nor grand rounds had a significant influence on any of the three MBI subscales. The wellness group meetings occurred over dinner at the wellness directors' homes letting the residents have an organized wellness experience followed by open discussion. While the resident wellness groups seem to

be a vital component to the curriculum, further study of the whole curriculum must be conducted. This study is in concert with other publications which show that peer to peer support is an important component in a comprehensive wellness curriculum to help reduce burnout.

Expanded mentoring: Cultivating collegiality, inspiration and pride throughout the physician's career

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Learning objectives
1. Define the components of the expanded mentoring program.
2. Assess the program's initial results in relation to their own organizations.
3. Determine which aspects of the program could be implemented in their organizations.

Project objective/background
The Expanded Mentoring program was conceived in 2016 when physician health and wellness leaders identified a need to help their colleagues stay inspired and motivated throughout their careers. The goals of the program are to:
- Support the career path of each physician
- Reconnect physicians to the meaning in and purpose of their work
- Celebrate advancement and the stages of a physician's career
- Recognize physicians who are in a rough spot and give support to rekindle joy in their work

Methods
The program provides programming and mentoring activities for physicians organized by three themes:
- Begin Well: Orientation sessions, celebrations, and activities aimed to support physicians during their first five years with the organization, and to cultivate collegiality and pride of place.
- Stay Strong: Cohorts of 5-7 physicians convene every 5 years for a facilitated reflection on and celebrations of lessons and accomplishments, as well as their visions for their future.
- End Well: The program's "Wisdom in Medicine" component invites physicians in the last years of their careers to offer their perspectives on the successes they experienced and challenges they faced in staying inspired and open to the joys of being a physician.

Results
In 2016, 135 eligible physicians have participated in some aspect of the program. A total of 44 co-mentors were identified and received training to increase their effectiveness in facilitating the group mentoring sessions. Program evaluation is ongoing, with quantitative data to follow.

Qualitative comments solicited from the participating physicians included:
- It was wonderful to be able to take time out of our often too-busy day to connect with our colleagues and to reflect upon both the challenge and gifts that come with being a physician.
- It was such a great session! We were all hugging each other by the end. Honestly, I went back to work feeling like I would have the best day ever.

Conclusion
The Expanded Mentoring program is still in the initial stages of development, but it is already yielding benefits. Participating physicians express a greater sense of meaning in their work, report higher levels of social support, and feel more positive about the organization. Our leaders are committed to the continued

implementation of this program to increase physicians' personal resilience and maintain a culture of wellness.

Factors associated with provider burnout in the neonatal intensive care unit

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Learning objectives
1. Understand the variability in organizational factors and patient characteristics that may place providers at risk for burnout
2. Identify the organizational factors most strongly associated with neonatal provider burnout
3. Understand the increased sensitivity of nurse burnout to organizational factors

Project objective/background

Neonatal intensive care unit (NICU) providers are at high risk of burnout, with implications for compromised quality of care. NICUs vary greatly in patient acuity and volume and represent a wide array of organizational structures, but the effect of these differences on NICU provider burnout is unknown. This study sought to test the relation between provider burnout prevalence and organizational factors within California NICUs.

Methods

Provider perceptions of burnout were obtained from 1934 nurse practitioners, physicians, registered nurses, and respiratory therapists in 41 California NICUs, using a validated four-item questionnaire based on the Maslach Burnout Inventory. NICU capacity, nurse staffing hours, and patient admission rates were extracted from the California Office of Statewide Health Planning and Development database, and high-risk infant demographics were extracted from the California Perinatal Quality Care Collaborative database during the same time period. The relations between burnout and organizational factors of each NICU were evaluated using t-test comparison of quartiles, univariable regression, and hierarchical multivariable regression with variable selection via least absolute shrinkage and selection operator.

Results

Overall burnout prevalence was 26.7±9.8%. The highest burnout prevalence was found among NICUs with higher average daily admissions (32.1±6.4% vs 17.2±6.7%, $p<0.001$, **Figure 1**), higher average occupancy (28.1±8.1% vs 19.9±8.4%, $p=0.02$), and those with electronic health records (28±11% vs 18±7%, $p=0.03$). In sensitivity analysis, nursing burnout was more sensitive to organizational differences than physician burnout in multivariable modeling, significantly associated with average daily admissions (PE 7.76±0.80, $p<0.001$), late transfer proportion (PE -0.38±0.07, $p<0.001$), nursing hours per patient day (PE 0.64±0.12, $p<0.001$), and mortality per 1000 infants (PE 0.66±0.21, $p=0.002$). Burnout prevalence showed no association with proportion of high-risk patients, teaching hospital distinction, or in-house attending presence.

Conclusion

Burnout is most prevalent in NICUs with high patient volume and electronic health records, and may affect nurses disproportionately. Interventions to reduce burnout and promote joy in medicine may be of increased importance in NICUs with 10 or more weekly admissions.
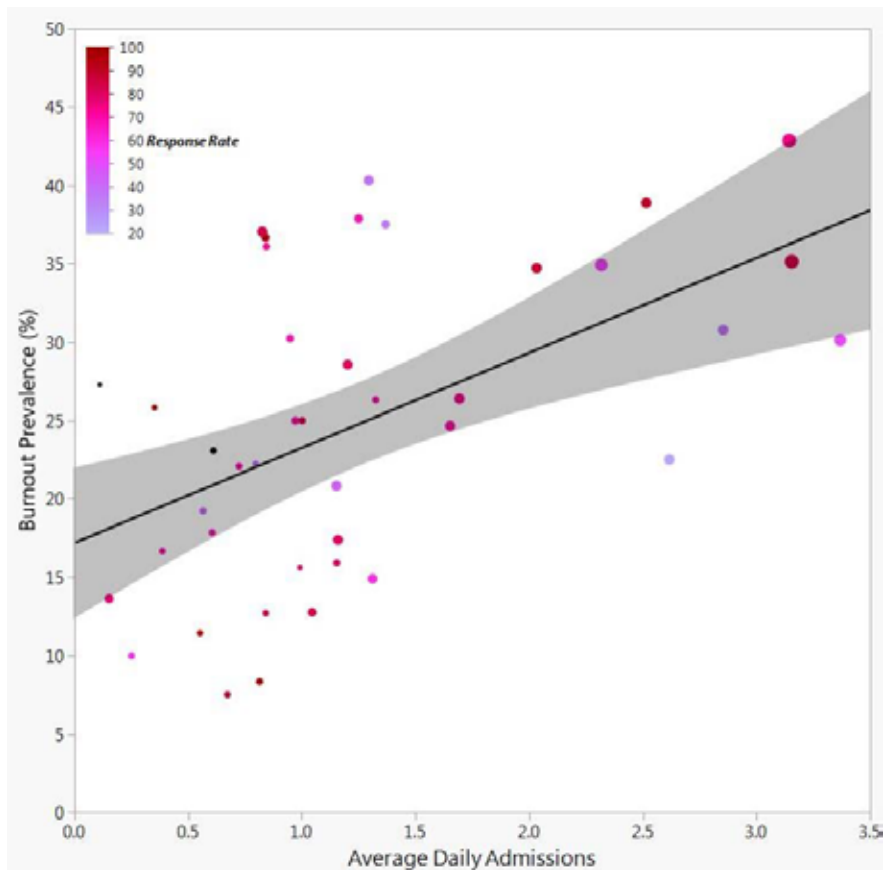
Figure 1. Relation between admission rate and burnout prevalence in 41 NICUs showed significant positive association. R=0.53, p<0.001, n=1934 providers. Point size proportional to number of licensed NICU beds, shading proportional to questionnaire response rate.

Identifying mechanisms for sustainable physician well-being in hematologists, medical oncologists and palliative medicine physicians in a comprehensive cancer center

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Learning objectives

1. Participants will be able to identify two possible areas that may contribute to distress, burnout and depression in hematologists, medical oncologist and palliative care physicians
2. Participants will be able to describe the interaction between individual and organizational factors that may be necessary and sufficient to create joy and well-being in our physician population.
3. Participants will be able to delineate those policies that may be leveraged from the enterprise-wide wellness committee activities to create sustainable physician well-being and joy.

Project objective/background

The emotionally intense environment of a comprehensive cancer center led us to conduct a survey to identify areas of distress, burnout, and depression in hematologists, medical oncologists, and palliative medicine physicians at the Cleveland Clinic Taussig Cancer Institute. To our knowledge this is the first survey of its kind to use a validated instrument specific to physicians. This first step of our ultimate long-range goal is to promote physician wellbeing, increase engagement and the creation of joy and well-being within our population in a sustainable fashion

Methods

Physicians in the cancer institute were sent an electronic invitation to anonymously participate in a survey to assess their perceived level of professional burnout. Included in the survey were the PHQ-2 and Physicians Well-Being Index (PWBI). We also collected various demographics and data on their current participation in healthy behaviors.

Results

86% of the physicians responded "Yes" to the "burned out" question of the survey, and 50% were found to have poor mental QoL based on PWBI scores. Multivariate analysis revealed characteristics most associated with poor mental QoL include administrative workload (>15 hrs/wk), lack of spouse or partner, and higher student debt (>$100,000).

Conclusion

Burnout appears to be related to an interaction of workplace, personal and financial factors. Our data provides direction that the focus of successful, sustainable interventions to enhance joy and professional well-being will need to include personal, financial, and organizational domains. This may include the integration of technology, physical activity and the leverage of the enterprise-wide wellness committee activities.

Implementation of a healthy catered food policy into a large medical group

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Learning objectives

1. Appreciate the impact of healthy food served during the physicians' workday on work-life satisfaction, well-being, productivity and patient care.
2. Describe the key nutritional elements of a healthy catered food policy.
3. Learn how a large, complex medical group has successfully implemented this policy, including organizational and operational barriers, solutions and results.

Project objective/background

Physicians are often challenged to find healthy food during their busy workday. And yet healthy food consumed at lunch has an immediate positive impact on the physicians' afternoon productivity and quality of care, compared to the typical American lunch—high in salt, fat and sugar. Lunches also represent a significant part of physicians' overall eating habits. This project presents the results of implementing a Healthy Catered Food policy into a large, complex medical group.

Methods

A healthy catered food policy was developed to meet a set of nutritional goals around calories, salt, fat, sugar, and other nutritional concerns. The result was a guideline for ordering healthy food for physician lunch meetings. The guideline was implemented over the course of two years, during which a variety of organizational and operational barriers were addressed and solutions developed. This included working with national restaurant chains and local restaurants to develop specific menus that complied with the policy, and then introducing these menus to the administrative staff responsible for ordering the food.

Results

A survey was sent to 7,602 SCPMG physicians and 2,781 were returned, for a response rate of 37%. Results indicated that 64% "have noticed more healthy food being served at physician meetings" and 36% report that "they have improved their eating habits as a result of our focus on health and wellness." In a related, more focused measurement process, physician "wellness champions" targeted certain meetings for implementation of the Healthy Catered Food policy. Results indicated 88% compliance with the policy. An estimated 34,000+ meals were served, reaching more than 1,200 physicians, based on a one-year time period. With a calorie savings of 700 calories per meal, compared to the standard American lunch (sandwich, chips and a cookie), this represented 6,608 pounds of body weight or about 5.6 pounds per person/year.

Conclusion

Eating healthy is difficult in America and particularly so for the busy physician. Making healthy food convenient and easy to access is also difficult. SCPMG is creating an environment where choosing healthy food is easy and once implemented is becoming the norm. Furthermore, it is well received and is contributing to overall improved nutritional profiles with immediate impact on physicians' energy and performance on that day, as well as improving overall physician well-being and work-life satisfaction.

Implementation of exercise "rooms" within the hospital setting and exercise options at the medical office for physicians and staff

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Learning objectives

1. Appreciate the impact of access to convenient exercise options at medical centers and outlying medical offices on physicians' work-life satisfaction, well-being, productivity and patient care.
2. Describe the key elements of a relatively low-cost exercise space and recommended equipment.
3. Learn how a large, integrated medical care system has successfully built exercise rooms within medical centers and provided exercise options within medical offices.

Project objective/background

Physicians are often challenged to find time to exercise during their busy workday. Having convenient access to exercise spaces and equipment at the medical center campus or outlying medical office contributes to overall health and well-being, work satisfaction and daily levels of energy and performance. However, availability of space and costs are major barriers to building these spaces and providing these options. This projects demonstrates how a large medical care system created effective exercise spaces for physicians and staff by using relatively small amounts of medical center space at low cost (compared to full-scale onsite gyms) and created exercise options at outlying medical offices.

Methods

Space meeting certain minimum criteria for implementing an onsite exercise room was identified by each medical center campus in Kaiser Permanente's Southern California region (n=16 hospitals). Interior design modifications and a standard set of exercise equipment selected by the Director of Fitness for Kaiser Permanente Southern California was provided for each site. Medical offices (with much more limited space options) were provided an "exercise wagon" that contained a standard set of exercise equipment (yoga mats, roller balls, etc.) and instructions on use. (n=85 medical offices).

Results

A survey was sent to 7,602 SCPMG physicians and 2,781 physicians responded, for a response rate of 37%. 33% of respondents have "increased their physical activity as a result of our focus on health and wellness." 16% of respondents have used the hospital exercise spaces. This compares favorably to a national rate of 16% of Americans who belong to a health club. Anecdotal reports from local physicians indicate that the exercise rooms are a true work-life balance benefit because of the convenience and easy access to the space. On-call, overnight physicians also report the value of having onsite exercise spaces.

Conclusion

It isn't easy finding time to exercise even when motivated. Having easy access to exercise equipment and a culture that supports exercise at the worksite makes it easy to do the healthy thing. Even with tight space limitations and cost considerations, exercise space and equipment can be provided and represents an investment that clearly pays off in terms of health and well-being, and work-life integration.

Individual and organizational factors associated with physician well-being

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Learning objectives
1. Compare life satisfaction and burnout symptoms across specialties, gender, self-care practices, off-hour work efforts, and perceived work experience.
2. Identify factors contributing to greater or lesser life satisfaction and burnout symptoms.
3. Examine what organizations can do to improve physician well-being.

Project objective/background
About half of America's physicians report burnout symptoms. In response to an organizational priority to enhance physician wellbeing, we assessed physician wellbeing and empirically examined its relationship with factors encompassing multiple dimensions of their lived experience.

Methods
The study took place in a large multi-specialty group practice serving about one million patients. A survey was delivered to 1,201 employed physicians, regarding life satisfaction, burnout symptoms (using a non-proprietary single-item measure), self-care practices, perceptions of work environment. Survey responses and electronic health records data on physician work efforts, e.g., time spent on desktop medicine during off-hours (9pm-5am), and leadership role were used in descriptive and multivariate regression analyses.

Results
Survey response rate was 73%. Average life satisfaction was 78 (SD=16) on a scale of 0-100; 36% reported burnout symptoms (34% among non-primary care physicians, 25% among pediatricians, 43% among family physicians, and 50% among internists). 36% slept$\geq$8hrs/night, 70% exercised$\geq$2days/week, 31% practiced mindfulness$\geq$1day/week; 82% perceived having control over work schedule; 12% felt that physicians are highly valued; 58% reported calm atmosphere in work area. Life satisfaction was positively and significantly associated with self-care practices such as sleeping$\geq$8hrs/night ($p<0.01$), exercising$\geq$2days/week ($p<0.05$), practicing mindfulness$\geq$1day/week ($p<0.05$), perceived control over work schedule ($p<0.001$), feeling highly valued ($p<0.001$), and a positive atmosphere in work area ($p<0.001$). Female physicians reported lower life satisfaction ($p<0.05$) and higher odds of burnout ($p<0.05$). Higher odds of burnout were also associated significantly with spending more time on desktop medicine during off-hours ($p<0.05$) and with having a leadership role ($p<0.05$). Physicians sleeping$\geq$8hrs/night ($p<0.001$), perceiving control over work schedule ($p<0.001$), feeling highly valued ($p<0.01$), and calm atmosphere in work area ($p<0.001$) had lower odds of burnout.

Conclusion

Variation in life satisfaction and burnout symptoms across specialties, gender, self-care practices, off-hour work efforts, and perceived work experience suggest important protective and harmful associations with physician wellbeing. The status quo is unsustainable. Achieving joy and meaning in practice requires fundamental organizational and individual changes. Regularly assessing and reporting physician wellbeing should become an important part of efforts to achieve the quadruple aim for healthcare delivery organizations. The design and evaluation of interventions aimed at improving physician wellbeing should be guided by empirical evidence on organizational and individual determinants of physician wellbeing.

Interventions to promote wellness in emergency medicine physicians: A systematic review

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Learning objectives
1. To understand available literature on wellness interventions in emergency medicine.
2. To understand which interventions promoting wellness in emergency medicine have been successful and which have not.
3. To understand what further research is needed to establish effective wellness interventions in emergency medicine.

Project objective/background

Physician burnout now affects more than half of physicians and is increasing as health care provider demands increase. Among physicians who demonstrate symptoms of burnout, emergency medicine physicians consistently rank among the highest. There is robust and evolving scientific literature that demonstrates the effects of burnout, including medical error, patient safety, patient satisfaction, deleterious effects on physician health and high rates of physician suicide. Recent studies have moved past the quantification of the problem of burnout to investigate what has been shown effective in reducing burnout and increasing overall physician wellness and resilience. Since emergency medicine is disproportionately affected among medical specialties, examining what interventions are being implemented in this high-risk field to promote physician wellness and resilience is critical.

Methods

In this systematic review we searched MEDLINE, Embase, PsycINFO, Scopus, Web of Science, DARE and Cochrane Register of Controlled Trials from inception to March 15, 2017 for studies of interventions in emergency medicine to prevent and reduce burnout or to promote physician wellness or resilience. We excluded studies of medical students or non-physician health-care providers. The reference list of eligible studies and other systematic reviews were hand searched. Two independent reviewers evaluated eligibility of abstracts. All studies of emergency medicine physician wellness programs that involved an intervention that was later evaluated were included.

Results

Very few studies have been done to evaluate wellness interventions for emergency medicine physicians. Due to the paucity of available intervention studies, we conducted a qualitative systematic review. The included studies were categorized by type of program according to the 6 dimensions of wellness as defined by the National Wellness Institute, physical, social, intellectual, spiritual, emotional and occupational. Many studies fall into multiple categories. Overall interventions that target emotional outcomes are most prevalent, with measure of empathy most common. Most interventions primarily focused on residents.

Conclusion

Despite the extensive attention given to physician burnout, one of the most at risk groups, emergency physicians, is critically understudied. Previous studies have emphasized the importance integrating organizational focused strategies with individual level strategies, but the emphasis in emergency medicine

wellness interventions is heavily weighted to individual interventions. Further research is needed to establish interventions specifically to promote wellness and resilience in emergency medicine.

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Kaiser Permanente HealthConnect Essentials

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Learning objectives:
1. Improve work-life balance by maximizing EMR functionality for greater quality, clinical accuracy, and to reduce documentation time.
2. Improve efficiency of evidence based ordering.
3. Increase efficiency of chart review, data retrieval and searching for information in KPHC.

Project objective/background: KP HealthConnect Essentials provides a program dedicated to training physicians with skills to reduce the time and stress of EMR documentation while providing highly efficient, cost-effective, high quality medical care to Kaiser Permanente's members. The curriculum includes core skills relevant to all specialties with additional relevant skills for specialists.

The three-day program is fully funded by SCPMG, directed by physician faculty, and supported by Workflow Consultants and dedicated training staff.

The program's mission is for physicians to realize significant improvement in efficiency and regain meaningful time in their day.

Methods:
- Steering Committee established for oversight
- Programs designed by specialty physician leaders
- Physician-to-physician training and coaching model
- Time allotted to build efficient tools for use back in the clinic or hospital
- Tranquil program venue
- Real-time question/response tool
- Daily and post-session follow-up surveys to participants

Results:
- 3,037 physicians have completed KP HealthConnect Essentials (2014 -2016)
- We surveyed 1,690 physicians that attended the Adult Primary Care, Medical Specialties and Pediatric Essentials since the program began. When asked the following questions we have had outstanding responses:

The training I received today has equipped me with critical skills that I can use in my daily Operations 98.9% Agreed
Today was a productive use of my time. 99% Agreed
Do you think your documentation will improve by what you have learned here? 97% Agreed
How much time do you think you will save from taking this course? 81.5% felt they would save 4 minutes or more an hour.
Would you recommend this course to your colleagues?

Over 99% said Yes

Conclusion:

- Of the 1,690 physicians surveyed 80% responded they will save time after attending KP HealthConnect Essentials.
    - Almost 50% of those believe they would save 4-5 minutes per hour, which equates to: 32 - 40 minutes in an 8 hour day – assuming a 5 day/8hr work week = 160 - 200 minutes per week. In 52 weeks, this is 138 - 173 hours (almost 3.5 – 4.3 weeks per year).
- Over 95% of the physician participants felt they learned critical EMR skills to improve daily patient care, that this course was a productive use of valuable time, and that their documentation would significantly improve.
- Over 99% of the physician participants said they would recommend this course to a colleague.
- Our large, multispecialty physician group enthusiastically endorses this organizational intervention and believes this is a vital component in their journey towards wellness.

Medical license questions and physician reluctance to seek care for mental health conditions

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Learning objectives
1. Explain relationship between medical license application questions and physician reluctance to seek care for mental health conditions
2. Describe characteristics of optimal medical license application questions

Project objective/background
To determine whether state medical license application questions (MLAQ) about mental health are related to physicians' reluctance to seek help for a mental health condition due to concerns about repercussions to their medical license.

Methods
In 2016 we collected initial and renewal allopathic medical license application forms from all 50 states and the District of Columbia. We coded MLAQs related to physicians' mental health as 'optimal' if they inquired *only* about current impairment from a mental health condition or did not ask about mental health conditions. We obtained data on care-seeking attitudes from a nationally representative convenience sample of 5614 physicians. Analyses explored relationships between state of employment, MLAQs, and physicians' reluctance to seek formal medical care for treatment of a mental health condition due to concerns about repercussions to their medical license.

Results
94% of medical licensing boards initial and renewal licensure applications were obtained. Only one-third of states currently have MLAQ on their initial and renewal application forms that are considered optimal. Nearly forty percent (2193/5566, 39.4%) of physicians reported they would be reluctant to seek formal medical care for treatment of a mental health condition due to concerns about repercussions to their medical license. Physicians working in a state in which neither the initial nor renewal application was optimal were more likely to be reluctant to seek help (OR 1.22 [95% CI 1.07-1.38, p=0.01] vs. both applications optimal).

Conclusion
Our findings provide evidence to support that MLAQ regarding mental health conditions present a barrier to physicians seeking help.

Multifaceted wellness curriculum to reduce depression and burnout rates among family medicine residents

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Learning objectives
1. Describe the evidence based skills that have been hypothesized to reduce rates of depression and burnout among family medicine residents
2. Describe a model for incorporating evidence based skills into a family medicine training program
3. Articulate a mixed methods research model of combining quantitative and qualitative analysis to adapt and study a wellness curriculum

Project objective/background
Burnout affects nearly half of practicing physicians in the United States (Shanafelt, 2012), with physicians in-training at particularly high risk (Dyrbye et al., 2014). A recent systematic review revealed that 29% of residents are depressed with a 15% increase in symptoms within the first year (Mata, 2015). Our goal is the development and evaluation of a skills based program for our interns to reduce rates of depression and burnout while promoting wellbeing throughout residency training.

This pilot program delivers four half day workshops to interns. Previous research shows promise for mindfulness-based (Fortney et al., 2013, Pflugeisen et al., 2016), cognitive (Sood et al. 2011, 2014), and self-compassion (Kemper et al. 2015, Olsen et al. 2015) interventions for health care providers, so these skills were targeted. The following validated surveys were obtained at baseline, and at each quarterly workshop: PHQ-9, GAD-7, Mindful Attention Awareness Scale, Self-Compassion Scale, and the Maslach Burnout Inventory Short Form. A series of structured interviews regarding overall resident wellness and the wellness program structure will occur at the end of the intern year. We will perform descriptive and correlational statistical analyses of the quantitative instruments and thematic text analysis of the qualitative responses.

At submission, we have implemented 3/4 of the workshops and have collected baseline data showing a mean PHQ-9 score of 7.7 (indicating mild depression on average), and a mean emotional exhaustion score of 9.6 with a standard deviation of 4.7 (indicating moderate rates of burnout). A full analysis will be completed after one year of data collection. Initial review of qualitative data shows themes including: residents identifying that mindfulness and self-compassion skills are important and would be useful to them; however, they also describe specific challenges in cultivating self-compassion and in readily incorporating mindfulness skills into their daily lives.

The goal within our residency program is to develop infrastructure and resources to combat depression, anxiety, and burnout among our residents, using an iterative planning process whereby our results and experience this year will inform our program in coming years. Through implementing and evaluating a longitudinal intern curriculum with a mixed methods approach, we hope to help residents build skills that will improve wellbeing during training, ideally impacting the rest of their careers. If we are successful in these aims, we expect that our most effective tools can be optimized and applied to other training programs/environments.

Personality traits and physician mental health and well-being: A review of prevalence and predictor studies

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Learning objectives
1. the most important and common personality traits and characters and their distribution in different groups of physicians
2. traits as predictors of mental health problems and well-being among physicians in prospective studies
3. some specific treatment considerations when meeting physician patients with personality disorder

Project objective/background
Personality traits shape a person's character and identity. There are relatively few studies on traits among physician. This paper reviews studies over the past 20 years and aims to answer: (I) is there a specific physician personality? (II) Are there specific personality traits that predict physicians' mental health and well-being? (III) Are there specific treatment considerations?

Methods
In preparation of a book chapter, a focused search was conducted in Medline on terms about personality and physician health. It was limited from 1996 to 2006 (October) and yielded 257 articles, and these were hand-searched for prevalence and predictor studies. Personality traits were assessed with different but comparable inventories. Personal clinical experience from being a psychiatrist for physician patients over 20 years will also be alluded to.

Results
The search identified 12 prevalence studies that compared traits among physicians with those among other groups and with population norms. There was no clear evidence that doctors' personality differs much from other comparable groups. The 14 predictor studies identified were all prospective and included outcomes such as depressive symptoms and suicidal ideation, work stress and burnout, work and life satisfaction, and problem drinking. Neuroticism trait was a risk factor for stress, depression and reduced well-being. Conscientiousness was both beneficial (reduced drinking and increased performance) and detrimental (for stress and burnout). Reality weakness is a new pathological trait associated with personality disorders (paranoid, borderline and schizotypal) and it predicted severe depressive symptoms, suicidal ideation, and lack of help-seeking in Norwegian doctors. Some clinical vignettes will be briefly presented. Personality disorders may be successfully treated by psychotherapy, but there are some obstacles linked to this particular patient-doctor relationship.

Conclusion
Despite no clear empirical evidence for a specific physician personality, the combination of neuroticism (self-criticism and low self-esteem) and conscientiousness (obsessiveness, compulsiveness, or perfectionism) makes doctors especially vulnerable to stress and future mental health problems. This is known also from clinical experience. We lack large and representative studies that compare traits among physicians with those among other groups. We need more studies on the role of personality disorders and especially narcissistic traits among physicians. The deviant trait reality weakness should be more widely validated. Organizations and systems should encourage physicians to seek therapy for personality problems.

Physician, heal thyself: Depression and burnout in graduate medical education

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Learning objectives
1. Identify factors that contribute to physician burnout and depression.
2. Discuss options for the prevention and treatment of physician burnout and depression.

Background
Problems regarding physician emotional and personal well-being receive inadequate attention in the current "culture of medicine". Depression and burnout have been associated with increased drug and alcohol abuse, infertility, depersonalization, lack of patient advocacy, and increased medical error. Burnout is defined as a loss of enthusiasm for work, fatigue at the idea of work, and cynicism. US physicians suffer more burnout than any other group of American workers. Little has been studied on the effects of burnout and depression in the graduate medical education (GME) cohort.

Methods
A 21 item questionnaire was emailed to 202 community-based internal medicine residency programs to be completed anonymously. The survey included questions measuring: personal life and habits, burnout, depression, and educational identifiers. As incentive for voluntary participation, respondents were given an option for charity donation paid by our institution

Results
A total of 149 responses were collected from May 16 to June 6, 2016. 71 residents revealed their training program, resulting in 28 identified Internal Medicine programs across 6 regions within the USA. Overall, the rate of depression among residents was 53% and the "burnout rate" was 27%. Residents that screened positive for burnout were more likely to be depressed, and those that screened positive for both burnout and depression were more likely to regret becoming a physician and give up their career in medicine.

Burnout was associated with less breakfast, not having a pet, and less exercise; depression was associated with not eating lunch. Both were associated with less sleep, less dinner, feeling unliked, feeling isolated and a lack of trust between residents. Larger program size (>36) was associated with more sleep, less isolation, and more trust amongst residents. US born residents felt more well-liked and exhibited more trust between residents. All findings were statistically significant.

Conclusion
Eating 3 meals a day, exercising, having friendship and trust between residents, and having a pet were all protective against depression or burnout. Larger program size and being US born may also be protective. We believe that GME training programs must recognize these protective factors and explore modification of their curriculum to include resident health and wellness. This must include improved support for meals and healthy eating, opportunities for exercise, and an emphasis on social support to ensure friendships and trust within the residency program. Physician heal thyself: we must mend our future.

innovation. Finally, results of this project may also be contrasted with datasets from the international community, to provide a more global representation of physician health.

Physician health program involvement and reduced risk for malpractice claims

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Learning objectives
1. Be familiar with research demonstrating that PHP participants have lower malpractice risk rates compared to physicians in the general population.
2. Discuss PHP interventions that likely contribute to improved health and related practice safety.
3. Consider future research endeavors to replicate and build on these findings.

Project objective/background
In 1973, the American Medical Association (AMA) issued The Sick Physician, a seminal report, documenting the problems of doctors' illness and challenging doctors to address professional health problems in the medical community. The AMA called upon state medical societies to create appropriate avenues for the treatment and monitoring of doctors impaired by illnesses, including addiction, depression and heart disease. Consequently, physician health programs (PHPs) emerged and today are widespread, nationally and internationally. PHPs are geared to address many of the occupational hazards facing doctors including addiction, burnout, depression and substance abuse to name a few, which can lead to impairment and endanger the public's safety.

The Colorado Physician Health Program (CPHP), in collaboration with the Colorado Physician Insurance Company (COPIC) examined data on 818 CPHP participants retrospectively to determine whether medical malpractice risk/claims were different for CPHP participants compared to a matched physician cohort in the community. Using a Wilcoxon analysis we examined differences in annual rates of pre and post-monitoring claims for the PHP participants. This is the only study examining this issue to date. Our study demonstrated that after monitoring, PHP participants showed a 20% lower malpractice risk than the matched cohort and had an annual rate of claims which were significantly lower at the conclusion of monitoring suggesting that patient care may be improved by the PHP intervention itself, independent of diagnosis, specialty or years in practice.

Predictors of two-year attrition for primary care staff and clinicians

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Learning objective

1. At the conclusion of the presentation, participants will be able to discuss variables that were associated or not associated with attrition of primary care staff and clinicians in this study.

Project objective/background

Attrition of clinicians and staff in primary care contributes to reduced ability to meet the need for care, and the increased resulting demand on remaining clinicians and staff may lead to a "downward spiral" in which remaining clinicians and staff face even greater risk of burnout. Moreover, turnover places significant financial burden on the system as new staff and clinicians must be recruited and trained into their roles. Commonly proposed predictors of attrition include burnout, loyalty, and engagement.

Methods

We surveyed 490 staff and 257 non-resident clinicians at the study sites in 2013-14. In 2016, we collected rosters from those clinics and determined which individuals were no longer working in the system. Self-reported measures from the survey included the Maslach Burnout Inventory emotional exhaustion and cynicism subscales, likelihood to recommend one's worksite as a place to work (the PULSE question), the 12-item Gallup staff engagement survey, and a single item measure of whether respondents feel that "there is a clear and consistent set of values that governs the way we do business." We conducted logistic regression with attrition as an outcome for each proposed predictor, controlling for years in the system, staff versus clinician designation, and system, to identify self-reported measures in 2013-14 that were associated with no longer being in the system in 2016.

Results

In the interval between the time of the 2013-14 survey and the review of rosters in 2016, 42% of staff and 32% of providers left their systems. There was no significant difference between attrition rates between the two systems or between academic and non-academic practices. None of the standard scales (emotional exhaustion, cynicism, likelihood to recommend the clinic, or the Gallup engagement score) predicted attrition. However, people who disagreed with the single item about "clear and consistent values" had a greater likelihood of attrition. Other factors protective against attrition were being a clinician (versus staff member) and having a tenure of at least 5 years in the system.

Conclusion

Although there may be good reasons to combat burnout and promote staff experience, these did not appear to be the primary drivers of attrition within this sample. Other factors such as convenience of the commute, salary, or opportunities for advancement may play a role that is not captured by work experience.

Prevalence and determinants of physician burnout in a large academic health system

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Learning objectives
1. Describe the prevalence of burnout at a large academic health system
2. Identify predictors of burnout for targeting interventions
3. Identify outcomes of burnout

Project objective/background
Physician burnout is associated with depression and suicide, and is a major challenge facing the physician workforce. Burnout also negatively impacts patient care. Our objective was to assess correlates of physician burnout in a large academic health system.

Methods
We analyzed data from a communication skills course conducted at a large academic health system between August 2013 and May 2014. Participation was mandated for all physicians. At the start of the course, physicians completed the Maslach Burnout Inventory- Human Services Survey (MBI-HSS), a validated measure of work-related feelings and attitudes. Scores were dichotomized into burnout versus no burnout based on established methods. Employment factors were provided by the Office of Professional Staff Affairs including: race, age, marital status, number of dependents under 18 years, FTE status, proportion of clinical activity, practice setting, number of used vacation and meeting days (past year) and years in practice. We used multivariable regression to assess the adjusted association between these factors and burnout. We also assessed the adjusted association between physician burnout and those who subsequently left the organization; productivity based on RVU percentile; frequency of ombudsman complaints, and patient satisfaction, as measured by the Consumer Assessment of Healthcare Providers and Systems (CAHPS).

Results
The sample included 1,145 physicians; 32% were female, 79% were Caucasian, and the most common specialty was Internal Medicine (38%). Thirty-five percent met criteria for burnout (26% for emotional exhaustion, 22% for depersonalization). In the model of predictors of burnout, a higher proportion of clinical activity (OR 2.88; 95%CI 1.58- 5.28) was associated with higher odds of burnout and emotional exhaustion in particular (OR 3.05; 95% CI 1. 56-5.97). Compared to Caucasian physicians, non-Caucasian physicians reported lower odds of overall burnout (OR 0.54; 95%CI 0.36-0. 82). In adjusted analyses, emotional exhaustion was associated with higher odds of leaving the organization (OR 2.19; 95%CI 1.14-4.18). Depersonalization was associated with ombudsman complaints (OR:1.72;95%CI:1.02-2.89). Overall burnout was not associated with patient satisfaction of physician communication or productivity.

Conclusion
More than a third of physicians met criteria for burnout. Burnout was strongly related to time spent in clinical work. Emotional exhaustion was associated with leaving the organization, and depersonalization

with more ombudsman complaints. Our findings indicate physician burnout has important implications for physician retention and patient care.

Resident wellness in anesthesiology

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Learning objectives
1. Identify stressors that decrease well-being in anesthesiology residency
2. Identify anesthesiology sub-specialties that are most stressful
3. Recognize the need and desire to improve resident well-being in anesthesiology

Project objective/background
The prevalence of depression, drug abuse, and suicidal ideation in physician residents is rising, and this is associated with increased job turnovers, reduced patient satisfaction, and decreased quality of care[1, 2]. Amongst physicians, anesthesiologists are at high risk for burnout, depression, and drug abuse secondary to a special subset of acute stressors and high intensity situations (3). The new ACGME Clinical Learning Environment Review (CLER) initiative mandates institutions to address resident fatigue and well-being, yet implementation of these programs are lacking in many anesthesiology programs. We created an anesthesia wellness battery to not only document the demand for a wellness program in anesthesia residency but also to determine specific factors that cause work stress across anesthesia subspecialties.

Methods
We created a wellness survey and electronically distributed it to all residents (n=81) at Columbia University Medical Center in April 2016. The survey focused on resident satisfaction and on Maslach and Leiter's six main factors of work stress: workload, fairness, control, balance between effort and reward, community, and values as well as resident preferences on wellness interventions. Analysis of the wellness survey ranking data was performed using the Friedman test to assess for differences between any of the anesthesia subspecialty rotations. The a priori p-value was set to $p < 0.05$. Post hoc analysis of the survey results compared all anesthesia subspecialties with the OB rotation using Wilcoxon rank-sum tests with corrections for multiple comparisons made using the Holm-Bonferroni method.

Results
37 of the 81 resident completed the survey (46%). The number of CA1, CA2, and CA3 residents that completed the survey was 13 (37.1%), 12 (34.3%), and 10 (28.6%), respectively. The majority of residents (70%) either did not know where to access resources for physician well-being and burnout or did not even know such resources existed. Of the anesthesia subspecialties, cardiac and intensive care rotations received the lowest score on the resident happiness scale; while the pediatric anesthesia rotation received the highest resident satisfaction score (Table 1). Low scoring factors on the survey indicated that the following needs the most improvement: access to healthy food at the work place and time and support for personal reflection, meditation, and exercise. Annual departmental retreat was the most desired intervention to improve well-being (Table 2).

Conclusion
Results from our anonymous physician wellness survey administered to residents within the Columbia University Anesthesiology Residency program demonstrated both a necessity and desire of improving resident well-being. Of Maslach and Leiter's six main factors of work and stress, community programming was the most desired intervention. Discovering the factors that contribute most and least to

resident physician well-being is important to make effective and efficient improvements in residency and to begin a wellness curriculum.

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Strengthen physician well-being

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Learning objectives
1. Demonstrate how physician wellbeing committees contribute to wellness and professional satisfaction
2. Identify key components of an effective wellbeing committee
3. Increase knowledge of the different types of resources that improve physician wellbeing

Project objective/background
California Public Protection and Physician Health, Inc. (CPPPH) is comprised of representatives from different major statewide medical societies and it is dedicated to promoting physician health.

Methods
CPPPH assembled stakeholders conducted a needs assessment of physicians and the obstacles of leadership and WBCs to address issues of physician health. Based on the data, CPPPH developed multi-dimensional improvement activities piloted in several healthcare settings.

Results
The challenges identified included: 1) limited peer communication 2) knowledge deficits with regards to resources to support physicians 3) lack of skills to engage leadership support 4) lack of guidelines. Improvement activities, such as peer networking and outreach, education resources and tools, conferences and guidelines, were developed in conjunction with stakeholders across the system of care; medical staff personnel, medical leaders and legal experts in the field of physician health. Addressing these needs resulted in increased levels of peer engagement and implementation of guidelines, and increased resources for wellbeing. Effective physician wellbeing committees contribute positively to professional satisfaction.

Conclusion
By assessing the physician community needs then developing and providing a multitude of targeted solutions, we were able to duplicate and measure the spread throughout California hospitals and medical groups improvement in physician health support activities.
Physician WBCs and medical group support can play a critical role in enhancing the culture of concern and the health and wellbeing of physicians. They act as educational resources for matters related to maintenance of health and prevention of impairment. CPPPH's statewide assistance for physician wellbeing committees has led to significant improvements in many hospital systems, including increased recognition for the need and availability of mental health and coaching services, and implementation of policies and guidelines that advocate for and facilitate assistance for late career, disruptive, and/or burned out physicians. Tested methods of strengthening physician wellbeing committees can be duplicated.

Team culture and practice change strategies: Associations with huddles, recognition, patient feedback and quality improvement

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Learning objective

1. Identify specific practice change strategies associated with team culture.

Project objective/background

Team culture is associated with decreased burnout and greater likelihood for clinicians and staff to recommend their clinic. Little research has examined the relationship between team culture and specific practice change strategies. We explored associations between team culture with team huddles, recent individual recognition, discussing patient feedback, and continuous quality improvement.

Methods

We surveyed 236 primary care clinicians (PCCs) and 423 staff at 15 county-based primary care clinics in San Francisco from November - December 2016. The cross-sectional survey included a validated, 7-item team culture scale as well as four questions where PCCs and staff self-reported the extent to which they huddle with their team every day, had received recognition in the last seven days, patient feedback is discussed at team meetings, and the health system trains and supports providers/staff to continuously improve care delivery (1=strongly disagree to 10=strongly agree). Associations were examined for PCCs and staff separately using multivariate linear regression with clustering by clinic. Covariates included numbers of PCC half-day clinic sessions or staff hours per week as well as number of years PCCs and staff worked in the health system.

Results

Reported training and support for continuous quality improvement (β= 0.68 among PCCs, 95% CI=0.40-0.85; β= 0.35 among staff, 95% CI=0.21-0.50) as well as reported recent recognition (β=0.27 among PCCs, 95% CI=0.13-0.41; β=0.40 among staff, 95% CI=0.27-0.53) were most strongly associated with team culture. A weaker though significant association was found between team culture and reported discussion of patient feedback at team meetings (β=0.13 among PCCs, 95% CI=0.08-0.20; β=0.12 among staff, 95% CI=0.08-0.16). Reports of team huddles were not significantly associated with clinic team culture among PCPs or staff when controlling for other factors.

Conclusion

Multiple strategies may help facilitate team culture, particularly training and support for continuous quality improvement and recent individual recognition. Future research should strengthen inferences about causal relationships by investigating whether implementing new practice change strategies results in changes in team culture.

The Canadian physician health and wellness survey: Building a national dataset

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Learning objectives
1. Learn about the health and wellness status of Canadian physicians and identify gaps and challenges for physician health.
2. Discuss the relevance of the national dataset as a reference for organizations, researchers, educators, and other stakeholders to access and utilize to promote physician health and wellness.
3. Learn how the dataset will help inform and enhance CMA initiatives in physician health and wellness.

Project background
Physician health and wellness is a definitive issue across medical training and practice, and is a growing concern within the medical profession. Attributed to a myriad of personal, occupational, and system-level factors, adverse outcomes such as burnout are not improving, and physicians are increasingly voicing distress and calling for resources and support. In recognition of this, physician health and wellness is an established priority of the Canadian Medical Association (CMA). However, there is relatively limited, recent data on the health and wellness status of physicians in Canada – the most recent national data being reported in 2008. This is a critical gap in knowledge, and limits prospective work in terms of refining and assessing initiatives. As such, the CMA recently developed and deployed the Canadian Physician Health and Wellness Survey, the primary objectives of which are two-fold: (1) Generate an up to date and relevant, baseline dataset for organizations, researchers, educators, and other stakeholders to access; and (2) utilize the dataset to help inform, target and enhance CMA initiatives.

Methods
A representative, random sample of approximately 25,000 practicing physicians and residents in Canada was identified using CMA membership data. With an anticipated response rate of 10% ($n = 2500$), this sample size will enable response comparison across demographics and sub groups. A series of relevant factors were selected for the content of the survey, including: Burnout; depression; fatigue; substance abuse/use; suicidal ideation; mental health; resilience; physical health (e.g., diet; physical activity); professional satisfaction (e.g., collegiality; occupational barriers); personal satisfaction; and other related factors (e.g., patient care; physician health services). Relevant and psychometrically validated measures were selected to assess these factors. Data from the anonymous, online survey will be analyzed using descriptive, univariate, and multivariate statistics. Given that data collection is ongoing, results were not available at the time of this submission. By the conference date, all data will be collected and results will be presented.

Conclusion
The health and wellness of Canadian physicians is a growing public health concern. This dataset will help the CMA and other stakeholders enhance and inform initiatives aimed at improving their health and wellness. There are also prospective implications for the development of a national research strategy, through collaboration among relevant stakeholders, to identify priorities, coordinate efforts, and promote

The creation of responsive and accessible physician mental health programs: How do we take care of our own?

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Learning objectives

1. Describe the elements of a successful physicians mental health program needed to address stigma and overcome other barriers to seeking help.
2. Discuss the emotional and mental health impact on healthcare providers when patient harm occurs and ways to address the "second victim" issue
3. Examine the process of developing a coalition that successfully obtained institutional support and funding for physician mental health programs

Project objective/background

Physicians suffering from burnout or other mental health concerns need timely and accessible treatment options. We sought to create responsive physician mental health programs that would decrease stigma and increase use of services to improve physician mental health and resilience.

Methods

We designed and implemented two different care models: the first utilized skilled mental health providers and the second uses peer support. 1) The UNC Taking Care of Our Own Program, is a specialized physician mental health program designed to decrease stigma and increase access. The program started in 2012 with philanthropic funding. 2) In the second model, we sought to address the stress associated when physicians grapple with their own role in serious unintended patient harm events. The physician may become the "second victim" in these traumatic events and may benefit from 1:1 peer support. We piloted and subsequently launched a program to provide rapid emotional support by a trained individual with similar experience (a peer) in the face of an adverse event.

Results

In the UNC Taking Care of Our Own Program, we witnessed over a 200% growth and demand for services across all clinical departments in the past two years, showing how de-stigmatizing professional help-seeking and increasing capacity to provide timely and readily accessible care can result in real change. Hundreds of physicians (both resident and attending physicians) have sought care. Recognizing the program's broad reach and positive feedback, the UNC Faculty Practice recently assumed responsibility for its continued funding. Importantly, this has changed the culture of how we discuss physician distress and removed barriers to seeking care.

In the Peer Emotional Support Program, the pilot successfully initiated the program infrastructure, recruited and trained 28 peer support mentors/volunteers, developed and tested training materials, and documented early participant satisfaction. An unexpected outcome was the development of a hospital policy describing how the 2005 Patient Safety Act and UNC Hospitals membership in a Patient Safety Organization provide federal protection from legal discoverability for Peer to Peer conversations. In the first year, 32 individuals who sought help from this program who would not have otherwise been identified. Program satisfaction ratings were high and the program is now funded by UNC Health Care System.

Conclusion
Our data strongly suggest that the creation of accessible physician mental health programs fulfill a great need, will be highly utilized, and are a vital component of an institutional approach to support physician well-being.

The current state of surgical ergonomics education in surgical training in the United States

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Learning objectives
1. Describe why surgical ergonomics education is important to surgeons
2. Describe the demand for surgical ergonomics education
3. State the approximate percentage of ACGME-accredited surgical training programs that currently provide formal (structured) versus informal (unstructured) surgical ergonomics education (SEE)
4. State whether formal or informal SEE was associated with more positive trainee attitudes
5. Describe impediments to sustainable formal SEE

Project objective/background
The burden of work-related musculoskeletal disorders (MSDs) in surgeons appears to be high, increasing, and no overarching strategy for redress currently exists. Work-related MSDs and resulting disability are of concern to 85% of surgeons and 95.7% state that ergonomics are important, but only 11-26% report awareness of recommendations. Authors representing twelve distinct surgical specialties have independently published articles on work-related MSDs among surgeons of their specialty and concluded that there is an unmet need for surgical ergonomics education (SEE). However, little is known about the current state of SEE in surgical training. This study aimed to define the current state of SEE in accreditation council for graduate medical education (ACGME)-accredited surgical training programs in the United States.

Methods
We performed a descriptive analysis of a 20-item questionnaire of ACGME-certified program directors from 14 surgical and interventional medical specialties. Formal SEE was defined as any organized education module that reviewed the occupation-specific burden of common work-related MSDs and described a framework for prevention via occupation-specific applied ergonomics. Program directors were queried regarding SEE provision, characteristics, and perceived trainee attitude toward the education.

Results
Questionnaires were received from 130 of 441 (29.5%) program directors. Two (1.5%) provided formal SEE and 33 (25.4%) provided informal SEE, which consisted of unstructured intraoperative directives and isolated lectures. Two programs previously provided SEE but both ceased doing so due to lack of an evidence-based framework and instructors. Trainees appeared to think that learning surgical ergonomics skills was a worthwhile time investment in 100% and 76.7% of current formal and informal SEE, respectively.

Conclusion
SEE is rarely provided in any capacity (25.4%), let alone in a consistent or evaluable fashion (1.5%). Impediments to sustainable SEE include lack of an evidence-based framework for education and

instructors. Recent studies have demonstrated that SEE is feasible, efficacious, and accepted. Thus, an opportunity exists to develop and validate a standardized, evidence-based, and reproducible SEE module. Ultimately, this module should be incorporated into a more comprehensive, multi-component, systems-based approach. This approach would improve efficacy and sustainability, as education-only ergonomic interventions have proven to be insufficient for significantly lowering the burden of disease in other high-risk occupations.

The Gold Foundation's mapping the landscape (MTL), journeying together initiative: A national model to support humanism and physician well-being

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Learning objectives

1. Describe MTL, the Gold Foundation's national model for linking literature review findings to advocacy efforts within a supportive community of practice (Gaufberg)
2. Describe two successful MTL projects on organizational approaches to reducing burnout and achieving joy in medicine (West, Hafferty)
3. Identify new avenues to participate in a robust community of practice dedicated to advancing humanism in healthcare and health professions education

Project objective/background

Mapping the Landscape, Journeying Together (MTL) is an initiative of the Arnold P. Gold Foundation Research Institute. Our community of practice engages in research-based advocacy to advance humanism in healthcare.

We aim to:

- Promote widespread understanding of research on humanism in healthcare, including helping physicians at various stages of professional formation achieve joy and meaning in work
- Link learning to new research and advocacy efforts;
- Promote the integration of humanistic principles and practices into health professions education, clinical learning environments, accreditation standards and healthcare policy.

Methods

A rigorous review of the literature is foundational to any effort to advance practice, theory, or research. Each June, MTL issues an RFP soliciting proposals for rigorous literature reviews on topics related to humanism in healthcare. A 'phase two' opportunity (Advocacy or Discovery Grants) is available to individuals who have completed an initial MTL literature review. Advocacy Grants support projects which use evidence derived from the literature review to make or advocate for change. Discovery Grants support studies designed to fill a research gap identified in their literature review.

Results

Since 2013, the Gold Foundation has funded 56 literature reviews and 10 advocacy and discovery projects through the MTL mechanism. Teams are brought together for an annual symposium to share findings, network and develop research and advocacy skills. Collectively, MTL teams are made up of almost 300 individuals from over 60 institutions. The publication rate from our first grant cohort is over 60%.

Our conference presentation will describe the overall MTL initiative and feature the work of two teams:

- Colin West and team's **Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis** was published in the Lancet in 2016. West and team subsequently received a discovery grant for a qualitative study on institutional approaches toward work-home interference, and are in the process of applying for an advocacy grant to develop a charter on physician wellbeing (partnering with the ACGME and Collaborative on Healing and Renewal in Medicine).
- Fred Hafferty and team's literature review **Humanism, the hidden curriculum, and educational reform: A scoping review and thematic analysis** was published in Academic Medicine in 2015 was and recognized with the Best Paper Award for the 2015 AAMC Research in Medical Education (RIME) sessions. A follow-up project (in collaboration with the ABIM Foundation), seeks to deepen our understanding of the quality of research about professionalism in medicine published in the top 100 journals over the past 30years.

MTL grant recipients report that the external funding from MTL, while modest, provides an impetus for individuals and their institutions to prioritize humanism-focused projects. Grantees report that this funding provides a viable way to link research findings to practice-based projects. MTL teams particularly value the annual symposium as a forum to disseminate findings, build skills, and forge new collaborations. Several MTL teams have successfully applied for larger scale funding using their preliminary results from their MTL projects.

Conclusion
The Gold Foundation's Mapping the Landscape, Journeying Together Initiative is a successful model of using research findings to make and advocate for change in healthcare.

The outcomes of an institution-wide resident/fellow wellness program

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Learning objectives
1. At the end of this activity, participants will be able to describe an example of an institution-wide resident wellness program.
2. At the end of this activity, participants will critique the implementation of a validated burnout inventory tool.
3. At the end of this activity, participants will recognize successful elements of a wellness curriculum.

Project objective/background
Physician burnout continues to be a concerning phenomenon plaguing our colleagues and adversely affecting our patients. A high proportion of medical students and residents suffer from work-related stress and burnout[1]. While changes to the learning environment are crucial, it is unclear which strategies are the most effective.

The project objective is to assess the impact of an institution-wide resident/fellow wellness program at a single graduate medical education sponsoring institution, Grand Rapids Medical Education Partners (GRMEP).

Methods
In 2015, a wellness sub-committee was established and began introducing wellness initiatives at the program level, as well as at the institutional level. Data used to determine the effect of the initiative included perceived value of the educational sessions, pre/post-session knowledge assessments and changes in burnout rates. The Maslach Burnout Inventory (MBI) was offered to all GRMEP learners from 17 specialties in the fall of 2015 (prior to any initiatives) and 2016. Feedback was obtained from the educational sessions and the data were summarized. Comparisons of pre/post session knowledge were performed using the Fisher's Exact test. MBI results were compared to normative data for physicians/nurses using the one-tailed t-test, as well as between years using the t-test.

Results
The response rates for the 2015 and 2016 MBI assessments were 43.1% (132/306) and 31.1% (97/312), respectively. GRMEP respondents scored significantly higher than the norm for emotional exhaustion (EE) (2015: 25.5 ± 12.3; 2016: 26.7 ± 10.7; norm: 22.2; $p<0.003$) and depersonalization (DP) (2015: 11.4 ± 7.2; 2016: 11.1 ± 6.8; norm: 7.1; $p<0.001$). Scores for personal accomplishment (PA) were significantly different than the norm (36.5) for 2015, but not 2016 (2015: 38.8 ± 5.9; $p<0.001$; 2016: 37.4 ± 7.0; $p=0.21$). There were no significant differences between 2015 and 2016 scores on the MBI subscales (EE: $p=0.45$; DP: $p=0.75$; PA: $p=0.13$). Rates of respondents categorized as high burnout on one or more of the subscales were not different between the years (2015: 84/132; 63.6%; 2016: 64/97;

66%; p=0.71). Post-test knowledge improved significantly for all three of the educational session objectives (p<0.001) and over half of the attendees thought the sessions were of great value.

Conclusion
Overall, GRMEP learners had consistently high rates of burnout (>60%), which is similar to rates noted for residents nationally. This study demonstrates that satisfaction with a wellness curriculum does not equate to reducing symptoms of burnout. The burden of burnout is significant among GRMEP residents/fellows and highlights the need for continued improvement of wellness initiatives.

Utilizing a custom-made app to track and address burnout amongst physicians-in-training: A pilot trial

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Learning objectives
1. Compare paper-and-pencil versus electronic measurements of burnout, outlining the pros and cons of each method, and usefulness in selected populations
2. Summarize the main findings of the study, focusing on relationship of depressive, anxiety symptoms, and background personality features with burnout measures
3. Discuss the limitations of self-report of burnout, and the prospects and limitations of objective measures collected from smartphones/wearable technology

Project objective/background

As awareness of the perils and costs of physician burnout become better known, much effort is spent into prevention and treatment at all levels of training. Residents are particularly vulnerable to burnout given several factors, including lack of control over their schedules, a preponderance of required work without much customization, and lack of financial rewards cited by senior physicians as mitigating factors. Residents/physicians in training are thus a prime target of prevention, identification & treatment efforts, because bad habits learned early may lead to lessened ability to fight burnout long-term. However, detecting fluctuating levels of burnout for optimal management is challenging; administering burnout questionnaires is time-consuming, not built into standardized routinely applied programs.

This project is a product of the collaboration between Baylor College of Medicine and Rice University, and tested a specially made smartphone app with a two-fold aim: 1- track burnout with the app, rather than traditional paper-and-pencil tests, studying the correlation between the two methods and 2- assess the usefulness of the app in decreasing burnout levels in residents exposed to our built-in intervention, a light, introspective reflection on realities of medical practice.

Methods

Using a custom-designed app, physicians-in training from psychiatry and emergency medicine were asked to rate burnout levels 3-4 times per week using a simple visual unnumbered scale. Some (the intervention group) were asked to indicate agreement or not with statements that are burnout-related. Residents were also surveyed with the Maslach Burnout Inventory (MBI), Patient Health Questionnaires-9 (for depression), Generalized Anxiety Disorder Scale 7-item scale, and the Big Five personality Inventory.

Results

Data was collected from 21 participants for a total of 271 electronic entries spanning 4-6 months. Electronic burnout measurement are moderately correlated with MBI scores (r o.48), but mostly with exhaustion scores (r 0.59) and negatively correlated with personal efficacy (r -0.38). Burnout levels were higher when working versus vacation. The control group has a higher mean burnout score than intervention group, which displayed a slow, gradually decreasing trend, while the control group does not.

Conclusion

Our preliminary results indicate that burnout tracking may be satisfactorily achieved by a custom-designed smartphone app, with results correlating well with traditional paper-based surveys. Fighting burnout may be facilitated via a simple, minimally time-consuming, intervention implemented over 4-6 months. Further study is needed to detect best/critical times to implement this intervention and how to best leverage technology in combination with traditional wellness programs.