THE SECOND TRIAL

GETTING STARTED

Surgical Education Culture Optimization through targeted interventions based on National comparative Data (SECOND) Trial

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CHAPTER 1: WHAT IS THE SECOND TRIAL?

OVERVIEW

Well-being is a pressing issue in surgical training. Follow-up data from the Flexibility in duty-hour Requirements for Surgical Trainees (FIRST) Trial (www.TheFirstTrial.org) demonstrated that 39% of U.S. general surgery residents experienced weekly burnout symptoms, with no difference between trial arms, implicating something other than duty hours. Moreover, resident well-being continued to decline year after year. Our recent national survey of surgical residency programs found that numerous aspects of the learning environment drive poor well-being. For example, residents reported low rates of resident camaraderie and high rates of mistreatment (discrimination, harassment, and verbal/physical abuse), which are associated with higher rates of burnout (Figure 1).

Through interviews and focus groups with residents, program directors, surgical faculty, wellness experts, and many others, we identified two main issues:

- First, programs have no data about their performance on well-being metrics compared to others in the country.
- Second, programs lack access to readily available strategies to make improvements.

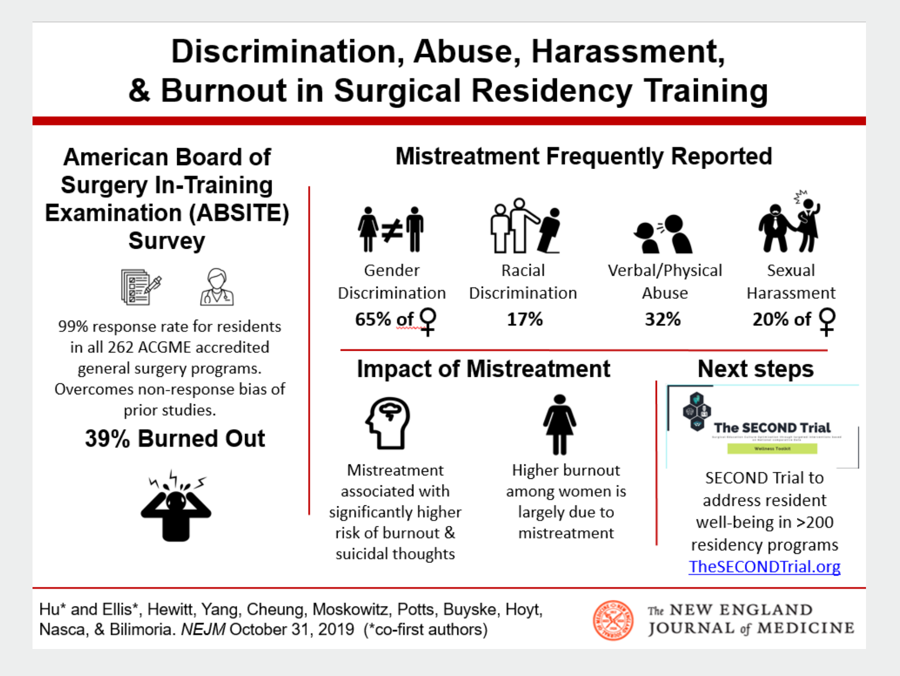


Figure 1. Discrimination, Abuse, Harassment & Burnout in Surgical Residency Training

WHAT IS THE SECOND TRIAL

The **SECOND Trial** is a prospective, pragmatic cluster-randomized trial examining how we can improve the learning environment and well-being of residents. Of 320 eligible general surgery programs, 215 programs (67%) have enrolled.

WHAT WILL WE RECEIVE IN THE SECOND TRIAL?

Each program participating in the SECOND Trial will be randomized to either Control or Intervention arm.

All programs (both Control and Intervention) will receive:

- A Well-Being Report

Intervention programs will also receive:

- A Learning Environment Report
- Access to the Wellness Toolkit
- Implementation Support

WELL-BEING REPORT

The Well-Being Report (Table 1) will provide each participating program, both control and intervention, with data on its residents' well-being (i.e., burnout rate, thoughts of attrition, suicidal thoughts). Each data point within the Well-Being Report will be provided as a quartile, which is intended to provide benchmarking against other programs in the country (e.g., for burnout, your program ranks in the fourth (worst) quartile of programs in the country), while protecting resident confidentiality (i.e., to prevent theoretical attempts to back-calculate the number of residents reporting any particular metric).

Burnout (6-Item Composite)	Q3	Q3	Q3	0.0-29.9	30.0-41.9	42.0-52.9	53.0-86.0	% Reporting at least Weekly Symptoms
Emotional Exhaustion (3-Item Composite)	Q3	Q3	Q3	0.0-27.9	28.0-37.9	38.0-47.9	48.0-79.0	% Reporting at least Weekly Symptoms
Depersonalization (3-Item Composite)	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	0.0-13.9	14.0-21.9	22.0-29.9	30.0-71.0	% Reporting at least Weekly Symptoms
Personal Accomplishment (3-Item Composite)	Q2	Q3	Q2	96.0-100.0	91.0-95.9	84.0-90.9	53.0-83.9	% Reporting at least Weekly Sentiments
Thoughts of Attrition	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	0.0-5.3	5.4-10.8	10.9-15.8	15.9-57.9	% Reporting Occurrence
Suicidal Thoughts	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	0.0-0.0	0.1-3.2	3.3-6.9	7.0-33.3	% Reporting Occurrence

Table 1. Well-Being Report

LEARNING ENVIRONMENT REPORT

The Learning Environment Report (Table 2) will provide each Intervention program with its performance on various metrics of the learning environment, benchmarked against other programs in the country. **See Chapter 4 for details.**

Workload & Job Demands (3-Item Composite)	Q3	Q2	Q2	0.0-7.7	7.8-12.0	12.1-17.5	17.6-44.1	Factor Score on 0-100 Scale
80-hour violations	Q3	Q2	Q2	0.0-21.7	21.8-34.8	34.9-49.2	49.3-88.9	% Reporting Any Months of Violations
1 day off in 7 violations	Q3	Q3	Q3	0.0-0.0	0.1-7.0	7.1-13.0	13.1-56.0	% Reporting ≥ 2 Months of Violations
Call >1 in 3 nights violations	Q3	Q3	Q3	0.0-0.0	0.1-3.9	4.0-7.9	8.0-60.0	% Reporting ≥ 2 Months of Violations
Resident Camaraderie (3-Item Composite)	Q2	Q2	Q2	3.4-3.8	3.2-3.3	3.0-3.2	2.4-3.0	Factor Score on 0-5 Scale
Appreciated by co-residents	Q3	Q3	Q3	4.3-5.0	4.1-4.3	4.0-4.1	3.3-4.0	Avg. Agreement on 1-5 Scale
Residents cooperate	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	4.5-5.0	4.3-4.5	4.1-4.3	3.2-4.1	Avg. Agreement on 1-5 Scale
Co-residents among closest friends	Q1: Exemplary	Q1: Exemplary	Q2	4.0-4.8	3.7-4.0	3.5-3.7	2.5-3.5	Avg. Agreement on 1-5 Scale
Faculty Engagement (2-Item Composite)	Q2	Q2	Q2	2.7-3.1	2.5-2.7	2.4-2.5	1.7-2.4	Factor Score on 0-5 Scale
A mentor who genuinely cares	Q2	Q2	Q2	4.1-5.0	3.8-4.1	3.6-3.8	2.9-3.6	Avg. Agreement on 1-5 Scale
Appreciated by attendings	Q3	Q3	Q3	4.1-4.8	3.9-4.1	3.8-3.9	2.3-3.8	Avg. Agreement on 1-5 Scale
Organizational Culture & Values/Flexibility & Control (4-Item Composite)	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	3.4-4.0	3.2-3.4	3.0-3.2	1.9-3.0	Factor Score on 0-5 Scale
Program takes my wellness seriously	Q2	Q2	Q2	4.2-4.9	3.9-4.1	3.7-3.9	2.1-3.7	Avg. Agreement on 1-5 Scale
Program helps decompress/debrief/cope after adverse events	Q2	Q1: Exemplary	Q1: Exemplary	3.8-4.6	3.5-3.7	3.2-3.5	2.1-3.2	Avg. Agreement on 1-5 Scale
Program emphasizes learning not blame from adverse events	Q2	Q1: Exemplary	Q1: Exemplary	4.1-5.0	3.9-4.1	3.7-3.9	2.6-3.7	Avg. Agreement on 1-5 Scale
Program responsive to resident concerns	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	3.1-5.0	2.8-3.1	2.5-2.8	2.1-2.5	Avg. Agreement on 1-5 Scale
Burnout is a problem in my program (reverse-coded so higher scores better)	Q3	Q3	Q3	4.3-5.0	4.0-4.2	3.7-4.0	1.9-3.7	Avg. Agreement on 1-5 Scale
Decisions made by favoritism (reverse-coded so higher scores better)	Q2	Q1: Exemplary	Q2	3.7-4.8	3.5-3.7	3.2-3.4	2.4-3.2	Avg. Agreement on 1-5 Scale
Efficiency/Resources (3-Item Composite)	Q2	Q1: Exemplary	Q1: Exemplary	3.1-3.7	2.9-3.1	2.7-2.9	1.7-2.7	Factor Score on 0-5 Scale
Effective support staff allows time for patient care	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	4.1-5.0	3.8-4.1	3.4-3.8	2.1-3.4	Avg. Agreement on 1-5 Scale
Program protects educational time	Q2	Q2	Q2	4.1-5.0	3.9-4.1	3.7-3.9	1.8-3.7	Avg. Agreement on 1-5 Scale
Time for direct patient care after admin tasks	Q3	Q3	Q3	4.3-5.0	4.0-4.2	3.6-4.0	2.7-3.6	Avg. Agreement on 1-5 Scale
Meaning in Work (4-Item Composite)	Q2	Q1: Exemplary	Q1: Exemplary	3.1-3.5	3.0-3.1	2.9-3.0	2.2-2.8	Factor Score on 0-5 Scale
Appropriate time in OR	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	4.3-5.0	4.1-4.3	3.9-4.1	2.6-3.9	Avg. Agreement on 1-5 Scale
Appropriate operative autonomy	Q2	Q2	Q2	4.2-5.0	4.0-4.2	3.7-4.0	2.7-3.7	Avg. Agreement on 1-5 Scale
Appropriate clinical autonomy	Q2	Q1: Exemplary	Q1: Exemplary	4.3-5.0	4.1-4.3	3.9-4.1	2.7-3.9	Avg. Agreement on 1-5 Scale
Satisfied with decision to be a surgeon	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	4.4-5.0	4.2-4.4	4.0-4.2	3.2-4.0	Avg. Agreement on 1-5 Scale
Satisfied with quality of resident education	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary	4.2-5.0	3.9-4.2	3.7-3.9	2.6-3.7	Avg. Agreement on 1-5 Scale

Table 2. Learning Environment Report

WELLNESS TOOLKIT

We intend for programs to use their Well-Being and Learning Environment Reports as a needs assessment, guiding their attention to particular areas that merit attention (Figure 2). They may then choose from a variety of potential interventions in the corresponding section of the Wellness Toolkit. Programs have complete autonomy to decide what, if any, interventions to implement and how they implement them. The Wellness Toolkit consists of ready-to-implement interventions that target resident well-being, as well as specific aspects of the learning environment. The Wellness Toolkit was developed through a thorough review of literature and best practice guidelines, a survey-based inventory of wellness initiatives at each general surgery residency program, follow-up phone interviews with program directors about initiatives reported in the inventory, and on-site Program Tours of representative programs. On these 2 day Program Tours, we brought a multidisciplinary team (e.g., residents, psychologists, psychiatrists, qualitative researchers) to perform structured observations of educational conferences (e.g., morbidity & mortality conference) and conduct focus groups and individual interviews with residents, faculty, support staff, and departmental, institutional, and educational leadership (e.g., program director, chair, DIO) to learn about their experiences, infrastructures, policies, interventions, leadership priorities, and culture.

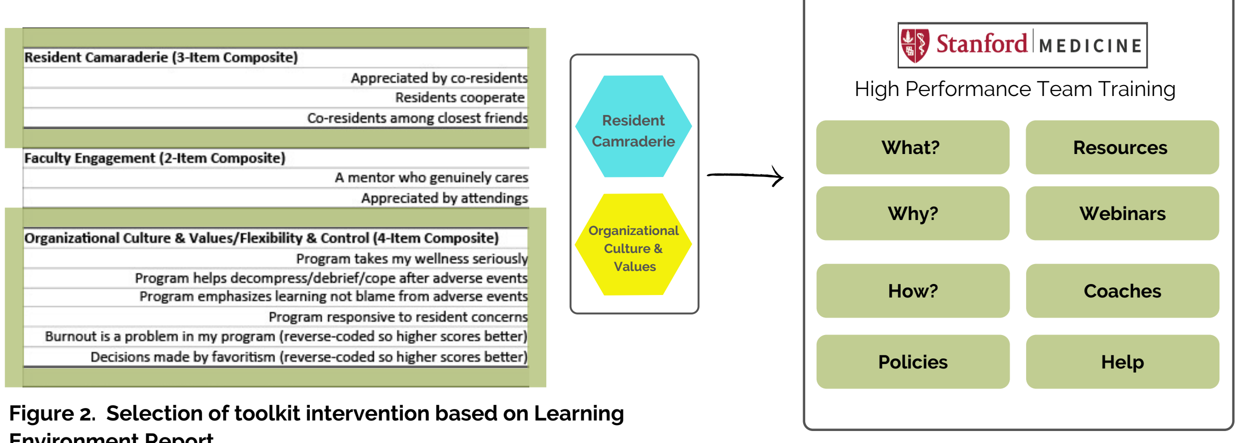


Figure 2. Selection of toolkit intervention based on Learning Environment Report

IMPLEMENTATION SUPPORT

We will provide Implementation Support to help programs tailor the interventions they have selected to their local contexts. Implementation Support may include webinars with experts to learn about specific interventions, collaboration calls to discuss implementation in real-time with peers, coaching calls to get expert advice in real-time, and/or in-person meetings.

WHAT OUTCOMES WILL THE SECOND TRIAL MEASURE?

The SECOND Trial will assess the impact of the SECOND Trial Intervention (Learning Environment Reports, Wellness Toolkit, implementation support) on resident burnout. Secondary outcomes will include other metrics of resident well-being (e.g., thoughts of attrition or suicide) and the learning environment. To ensure that increased emphasis on wellness does not negatively impact education or patient care, we will also assess resident test scores, resident operative case logs, and patient outcomes.

CHAPTER 2: WHAT IS WELLNESS?

WHY SHOULD WE CARE?

Burnout has profound personal consequences for physicians, including broken relationships, depression, substance abuse, and suicidality.[1] Moreover, resident well-being has been associated with higher-quality patient care,[2] fewer self-reported medical errors,[1] greater adherence to safety and practice standards,[3] and reduced attrition.[4] Among practicing physicians, physician well-being and engagement have been associated with higher levels of patient satisfaction[5][6] and greater productivity (as measured by provider payroll records).[7] In other words, programs that care for their residents will have residents who care for their patients. Moreover, residents who learn the importance of well-being and positive learning environments during residency will ultimately become attending surgeons who demonstrate and role-model wellness for future learners.

"People ask me all the time, "Well if you do this [wellness program] with the residents, then they won't want to do anything. They'll be lazy." And I say, "Well, you know that's actually not what I experience... If I have people who are happy, who like being here, they actually work harder. I feel like they would do anything that I asked, even at expense to themselves."

– Division Chief

[1] Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. InMayo Clinic Proceedings 2017 Jan 1 (Vol. 92, No. 1, pp. 129-146). Elsevier.

[2] Dyrbye L, Shanafelt T. A narrative review on burnout experienced by medical students and residents. Medical education. 2016 Jan;50(1):132-49.

[3] de Oliveira GS Jr, Chang R, Fitzgerald PC, et al. The prevalence of burnout and depression and their association with adherence to safety and practice standards: A survey of UnitedStates anesthesiology trainees. Anesth Analg. 2013;117:182–193

[4] Sullivan MC, Yeo H, Roman SA, Ciarleglio MM, Cong X, Bell Jr RH, Sosa JA. Surgical residency and attrition: defining the individual and programmatic factors predictive oftrainee losses. Journal of the American College of Surgeons. 2013 Mar1;216(3):461-71.

[5] Halbesleben JR, Rathert C. Linking physician burnout and patient outcomes: exploring the dyadic relationship between physicians and patients. Health care management review. 2008 Jan 1;33(1):29-39.

[6] Haas JS, Cook EF, Puopolo AL, Burstin HR, Cleary PD, Brennan TA. Is the professional satisfaction of general internists associated with patient satisfaction? J Gen Intern Med. 2000;15:122128.

[7] Shanafelt TD, Mungo M, Schmitgen J, et al. Longitudinal study evaluating the association between physician burnout and changes in professional work effort. Mayo Clin Proc. 2016;91:422431.

WHAT WELLNESS IS NOT: COMMON MISCONCEPTIONS

Misconception #1: Wellness means giving residents time off

Many people think that wellness means residents are just asking for more time off, which takes away from their education and training.

> I think the residents are overly entitled...My worry is the more we concentrate on talking about their wellness, which unfortunately seems to be equating to how much time you have off. Then you look at the ER doctors who work the most schedulable schedules [and] have the worst burnout ever. I think it's...really not about the time you have off...Having somebody bring me a tea or something isn't really going to change my burnout.
>
> – Attending

Response: Focusing solely on time off and work-life balance is an overly simplistic view of wellness. Surgical residents opt into the field of surgery fully ready to work hard and sacrifice their time to the rigors of training. In fact, the FIRST trial found:

1. Surgical residents strongly preferred flexible duty hour policies that allowed them to work longer when needed to provide patient care or for educational opportunities.[8]
2. The amount of time residents took off for personal activities (e.g., time for extracurricular activities, family/friends, rest, and health) was not associated with their well-being.[9]
3. Residents were willing to exchange time for personal activities for their professional interests and responsibilities.[10]

Residents' concerns about maintaining the rigor of their training are the reason that the SECOND Trial is evaluating balancing measures around educational quality (e.g., ABSITE scores, board passage rates, ACGME case logs). We have found that there are detrimental aspects of the learning environment completely unrelated to work hours that contribute to poor wellness in residency (e.g., mistreatment, workplace inefficiencies, incivility/lack of professionalism, low peer support, faculty disengagement) and ultimately detract from resident education and training. Our approach to wellness focuses on solutions for creating healthier and more supportive learning environments for residents.

[8] Yang AD, Chung JW, Dahlke AR, Biester T, Quinn CM, Matulewicz RS, Odell DD, Kelz RR, Shea JA, Lewis F, Bilimoria KY. Differences in resident perceptions by postgraduate year of duty hour policies: an analysis from the flexibility in duty hour requirements for surgical trainees (FIRST) trial. Journal of the American College of Surgeons. 2017 Feb 1;224(2):103-12.
[9] Bilimoria KY, Chung JW, Hedges LV, Dahlke AR, Love R, Cohen ME, Hoyt DB, Yang AD, Tarpley JL, Mellinger JD, Mahvi DM. National cluster-randomized trial of duty-hour flexibility in surgical training. New England Journal of Medicine. 2016 Feb 25;374(8):713-27.
[10] Kreutzer L, Dahlke AR, Love R, Ban KA, Yang AD, Bilimoria KY, Johnson JK. Exploring qualitative perspectives on surgical resident training, well-being, and patient care. Journal of the American College of Surgeons. 2017 Feb 1;224(2):149-59.

Look at the bigger system with respect to the learning environment...That's where the money is... If your faculty don't give you helpful feedback or don't recognize your needs or don't do their job as a teacher, it's going to impact your work-related stress. They don't give you the appropriate level of autonomy – whether it's too much or too little. So within that learning work environment, the faculty is a big piece of it...There's definitely something there in the local work environment...Some of it is faculty behaviors. Some of it is culture. Some of it is work processes, like in some resident clinics, residents don't get the same...support from...ancillary staff.

– Faculty Wellness Leader

Misconception #2: Resident wellness comes at the cost of attending wellness

Many attendings worry that resident well-being comes at the expense of attending well-being because attendings will ultimately have to do more work to pick up the slack.

> This work needs to be done...It's a tension between advanced practice providers, students, residents, fellows, and attendings...We're taking care of complex patients with very little margin for error and so, if...you take away from the responsibilities of one bucket, it will fall into one of the other buckets – or you'll offer substandard care. So, usually the attendings have the largest capacity in their buckets to absorb what is offloaded from other people. And ultimately, it's my patient. I'm responsible for their care. So I'm going to do it...So, I'm sure there's a certain amount of burnout and a certain amount of unwellness that exists, and it's sort of like energy. It can be neither created nor destroyed. I think it will be shifted to another provider...I think you'll see a spike in attending physician unwellness, and problems – depression, addiction.
>
> – Program Director

Response: Based on our conversations with faculty across the country, we believe the root of this concern relates to Misconception #1; attendings fear that wellness requires increasing resident time off, which shifts the work to others. Again, wellness is not just time off or working less, so wellness does not necessarily require anyone to do more work. Wellness is not a zero-sum game. We have seen programs with BOTH happy residents and happy attendings - and both with high and low workloads. Programs that are intentional about building a positive and supportive workplace culture tend to have residents and faculty that are happy, engaged, and productive. In fact, many wellness initiatives aimed at promoting resident wellness have the positive consequence of promoting faculty wellness as well. Most of us can see how faculty wellness trickles down to resident wellness; however, we've also seen the opposite to be true – improvements in resident wellness have changed their departmental culture and spurred faculty wellness.

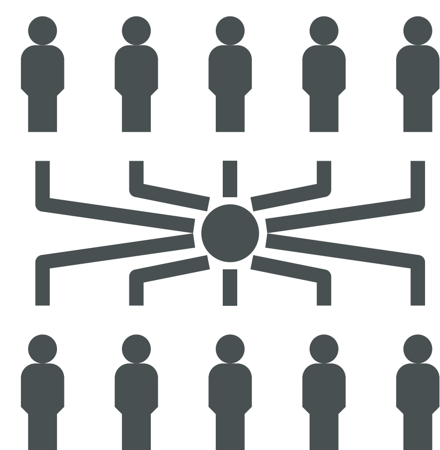
About a mindfulness intervention that was originally intended for residents:

> When I did my [mindfulness] training with four or five other very senior surgeons, they were cynics...but they got into it. They completely got into it. And many of them relayed instances where they were able to use what they had learned in their day-to-day life.
>
> – Department Chair

Misconception #2 Continued

A different program described how resident enthusiasm about a wellness program had trickled up to faculty:

> That has been really neat because it's kind of spreading...I think finally hearing it at the [faculty] retreat really helped me get it now. And then, finding out a bit more about what the residents have been doing, and...knowing what tools they're getting...We have some of our eye rollers...but the residents rave about it. They really speak highly of it, and so I think the faculty were like, "All right, if the residents are feeling like this is really useful and helpful and are speaking highly about it, we should know more."
> – Attending



A third program noted broader increased awareness and support for faculty wellness:

> I think wellness amongst physicians in general has been brought to the forefront. Not just for residents, but now even for faculty. They brought in...lots of different things to try and help not just surgeons, but physicians in general...We've gotten a lot of interventions on the faculty end because it's becoming bigger.
> – Attending

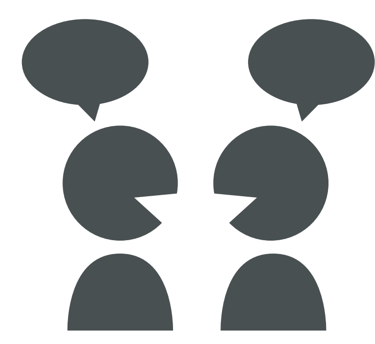
Misconception #3: Wellness interventions are cost-or time-prohibitive

Many program leaders are wary about implementing wellness initiatives at their institution because they expect the initiatives to be costly in terms of dollars and/or time.

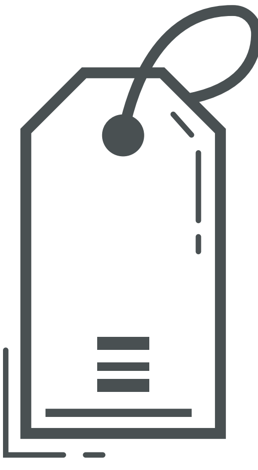
Response: We have observed that many wellness initiatives are either low-cost or free; they rely mostly on the commitment of dedicated residents, faculty, and staff. Many initiatives have been accomplished with resident time/effort; often, no more than visible leadership support is needed from faculty. In addition, we have observed that small investments in resident wellness can have a large impact in culture.

The following about a wellness curriculum comes from a resident:

> I really do like the fact that we have this program. It's not even like we're doing it every week or every two weeks. It's a once a month thing, and it's made a huge difference. Even though it's a small thing that happens...it's something I feel has dramatically shifted our structure in the way that we relate to each other and the way we react to each other. I'm a proponent of it, especially for surgeons.
> – Resident



When asked about the cost of this wellness program, its faculty leader explained:



> Honestly, I've done it with minimal cost. I don't think it has to be super expensive because what the residents need is to think that people are investing in their well-being. And that doesn't really cost anything. I think you can do it with a minimal amount of money.
> – Wellness Leader

Misconception #4: Wellness is a problem of individual resiliency

Many individuals attribute burnout to low resident resilience. As such, many programs tend to focus on resiliency training as a solution to burnout, without attempting to change problems in the learning environment. Interventions that focus solely on individual coping skills are often met with disillusionment and cynicism among residents. Residents commonly state that these interventions are “blaming the victim” and putting a “band-aid” over the real, systemic problems and inefficiencies that are contributing to burnout.

> It's this issue of this ‘pull yourself up by your bootstraps’...I hate it because it points the finger back at the resident...Offering opportunities for self–improvement is fine, but look at what makes our life hard when we’re working...
>
> – Resident

Response: Resident wellness is more than just an issue of individual resilience; it is a product of the training environment and requires thoughtful systems-level solutions as well as individual skills. However, residency programs should not forgo individual training programs altogether. Programs that teach skills for coping with the inevitable challenges of residency are important. Several of the programs that we toured included individual resiliency interventions as a core part of their approaches to address resident wellness.

> I'm not saying people get burned out because we're not resilient enough; that's not the message...I'm not saying the problem is you [because] you're not resilient. But I'm saying, "Hey, here are ways to be more resilient in this frustrating system AND at the same time be at the table, chip away at these things that are important, and create a culture and environment that helps us take care of each other because...most environments still don't encourage that...I think that has to happen in parallel.
>
> – Wellness Leader

Therefore, in order to meaningfully address resident wellness, it is important for programs to take a comprehensive approach and address ***both*** individual and systematic wellness interventions concurrently. It may be effective for programs to communicate to residents that wellness is a shared responsibility between the program and the individual resident.

Misconception #5: Wellness is new-agey "BS"

In the lay press, many of the things that are considered "wellness" do not resonate with practical surgeons; even a Google search for wellness will turn up a host of non-evidence based objects/activities (e.g., crystals, essential oils, juice diets) that don't appeal to us or have a reasonable scientific or even theoretical underpinning.

> I personally hate yoga. It makes me physically vomit...I can do the breathing stuff, but if I have to put my head down and do any of that sort of stuff, it physically makes me vomit. It's the absolute antithesis of wellness.
>
> – Program Director

Response: We urge everyone to think about wellness more broadly. There are many features inherent to the learning and work environment that impact wellness. A simple example: lack of input into the call schedule is a major dissatisfier. While no one disagrees that residents need to take call – for both patient care and their own education – residents are happier when they are able to make requests about the timing of these calls. At a minimum, they prefer to have advanced notice of their schedules so they can plan around them.

> The problem is that most programs put tons of resources into gyms and yoga and that kind of thing when really, it just misses the mark. It makes people more cynical.
>
> – Resident

WHAT WELLNESS IS: THE SECOND TRIAL'S CONCEPTUAL MODEL

Our conceptual model (Figure 3) is based upon an interdisciplinary review of existing models in the literature and validated by a Confirmatory Factor Analysis of the data contained in our Resident Well-Being and Learning Environment Reports.

Our conceptual model outlines eight domains in the learning environment that contribute to burnout and/or well-being in surgical residency training. Several of these domains are unique to the training environment and are distinct from those that have been previously documented in the practicing physician. [11] The impact of these domains (Efficiency and Resources, Meaning in Work, Organizational Culture and Values, Control and Flexibility, Resident Camaraderie, Faculty Engagement, Workload and Job Demands, and Mistreatment) is filtered through individual mediating factors (e.g., resilience, coping strategies, grit, emotional intelligence, and personality) to result in resident burnout or well-being.[12]

Ultimately, resident burnout and well-being have important consequences for patients (e.g., safety, quality of care), clinicians (e.g., workplace burnout and engagement), healthcare organizations (e.g., attrition), and society.

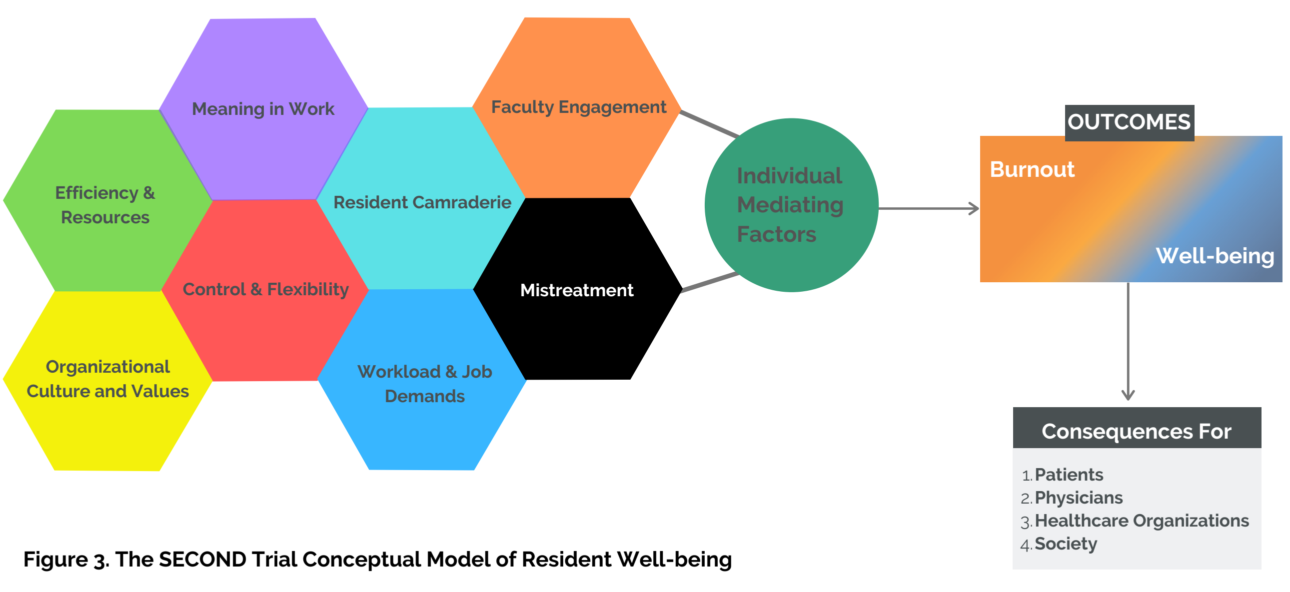


Figure 3. The SECOND Trial Conceptual Model of Resident Well-being

[11] Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. Mayo Clinic Proceedings 2017 Jan 1 (Vol. 92, No. 1, pp. 129-146).
[12] National Academies of Sciences, Engineering, and Medicine. Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being.

DOMAIN	DEFINITION
Efficiency & Resources	In addition to caring for the sickest, most complex patients in U.S. healthcare, surgical residents must master an ever-expanding set of clinical and operative skills necessary to function as stand-alone surgeons, while simultaneously inundated with administrative tasks. Between progress notes and discharge summaries, coding queries and insurance battles, lab draws and patient transport, surgical residents may find themselves with little time for their primary goals: patient care and education. The domain of Efficiency and Resources considers the resources that impact residents' ability to function at the highest level, including use of effective support staff, meaningful protection of didactic time, and the adequacy of space, computers, and other materials that allow for timely completion of work.
Meaning in Work	Finding meaning in work is critical for wellness in any career. However, surgical residents face unique challenges in this domain. For example, maintaining passion may be difficult for surgical residents as our training is among the longest in medicine, with some spending upwards of 10 years as trainees. Given our tradition of hierarchy, junior residents may be particularly at risk for losing meaning, as they have the least operative time, the most taskwork, and often the least input in decision-making. Even senior residents may grow disillusioned without clinical or operative autonomy. Additionally, surgical residents are often on the front lines of caring for sick patients, which may lead to emotional exhaustion and compassion fatigue.
Organizational Culture & Values	Surgical resident well-being is profoundly impacted by the values of the training environment; the ability of any initiative to impact individual wellness is influenced by whether the idea is supported by the culture of the program. This domain also considers program response to resident errors, as well as how programs deal with issues of fairness. Furthermore, this domain evaluates surgical training program commitment to values such as diversity, altruism, professionalism, and leadership.
Control & Flexibility	Resident autonomy and the ability to self-govern have a profound impact on the well-being of surgical residents. For example, this domain considers whether residents have meaningful input into their rotations and schedules. While no one is in disagreement that call is necessary for both patient care and education, allowing some flexibility or at least advanced notice about when that call is scheduled is a major contributor to wellness. This domain also highlights the importance of resident voice on the training experience; it evaluates if and how programs elicit feedback from their residents and whether there is an appreciable response to resident concerns.

Table 3. The SECOND Trial Conceptual Model of Resident Well-being Domains and Definitions

DOMAIN	DEFINITION
Resident Camaraderie	As surgical residents find themselves "in the trenches" together during training, collegiality between residents is an important aspect of wellness. This is a critical but complex topic, as surgical residents come from all walks of life and creating harmony and functional work relationships is not always easy or intuitive. This domain focuses on a sense of community at work, which may be influenced by resident program recruitment strategy, team structure and/or training, and both unstructured and departmentally sponsored social events. This domain also considers matters such as resident to resident cooperation, emotional support, and appreciation.
Faculty Engagement	The dynamic between attending surgeons and surgical residents is integral to training and therefore has great impact on resident well-being. Mentorship, for example, is immeasurably influential in the professional development and personal growth of surgical residents. This domain additionally includes appreciation of resident work by faculty, as well as the presence of faculty role models.
Workload & Job Demands	The term "resident" was coined when trainees essentially lived within the hospitals where they worked. The installation of duty hour regulations by the Accreditation Council for Graduate Medical Education (ACGME) in the early 2000s marked a culture shift in recognizing the impact of prolonged work hours on both patient safety and resident well-being, but, for surgical residents, the pendulum continues to swing on this issue. The FIRST Trial found that surgical residents considered flexibility in duty hours regulations (e.g., the ability to extend shifts) to be better for continuity of patient care and the acquisition of necessary clinical and operative skills.[13] However, flexible duty hours can negatively impact time available for family, extracurricular activities, and rest. Consequently, workload and job demands continue to be influential aspects of overall resident well-being. This domain considers not only duty hour regulations, but also productivity expectations, team structure, and delegation of work.
Mistreatment	Our recently published study highlighted the pervasive issue of discrimination, abuse, and harassment during surgical training.[14] Not only was resident mistreatment common, with nearly 50% reporting having experienced at least one form of it, but it was also significantly associated with resident burnout and thoughts of suicide. Surgical residents are uniquely vulnerable to mistreatment due to inherent power differentials in the training structure.

Table 3. The SECOND Trial Conceptual Model of Resident Learning Environment Domains and Definitions

[13] Bilimoria KY, Chung JW, Hedges LV, Dahlke AR, Love R, Cohen ME, Hoyt DB, Yang AD, Tarpley JL, Mellinger JD, Mahvi DM. National cluster-randomized trial of duty-hour flexibility in surgical training. New England Journal of Medicine. 2016 Feb 25;374(8):713-27.
[14] Hu YY, Ellis RJ, Hewitt DB, Yang AD, Cheung EO, Moskowitz JT, Potts III JR, Buyske J, Hoyt DB, Nasca TR, Bilimoria KY. Discrimination, Abuse, Harassment, and Burnout in Surgical Residency Training. New England Journal of Medicine. 2019 Oct 28.

CHAPTER 3: A ROAD MAP

Although program leaders may be interested in implementing local interventions to improve resident wellness, it may be daunting to know where to begin. In the SECOND Trial, we studied the implementation of policies, initiatives, and interventions that promote surgical resident wellness through Program Tours of surgical residency programs across the country, phone interviews with program directors, consultations with experts, and a thorough review of literature. In this chapter, we will share the insights we've learned about what works (and what doesn't work) when starting a wellness program at your institution.

CASE STUDY: WELLNESS IS NOT YOGA

On one of our Program Tours, we learned about a failed wellness initiative that became legendary within the department as a well-intentioned, but misguided attempt to improve resident wellness. This program offered free yoga sessions every other week for surgical residents and attendings. On the surface, this seems like a positive intervention.

So, what went so wrong?

The case of the failed yoga initiative captures many of the common mistakes that programs make when trying to implement a new wellness initiative.

1. The program did not solicit input from its residents before implementing the yoga initiative to ensure there was a need or desire for yoga.
"The thing is, it was just done. No one asked anyone if this would be a good idea. No one tried to talk to people about what the times would be and where this would be." – Resident

2. The program scheduled yoga for 7:00 PM on Friday nights, a time that caused it to compete with residents' other wellness priorities.
"I like the idea of the yoga. I think it's just that the implementation could be better especially because I don't think anybody wants to stay because it's at 7:00 PM. You sign out at 6:00 PM. Nobody wants to stay an hour later and then do yoga when you could go home to your family or significant other." –Resident

3. Even though the yoga sessions were optional and were scheduled outside of residents' work hours, residents felt that attendance at these yoga sessions became expected – an additional obligation to add to their already busy schedules.
"Everyone got emails like, "Why aren't people going to yoga?" which then puts the burden on the resident, like "Why aren't you helping your wellness by going to yoga?" There was the blame, "Do we need a yoga champion so that people go to yoga?" – Resident

"The point should be that at 7:00 PM you can do whatever you want, whether that be yoga, Netflix, sleep, drink wine, whatever." – Resident

4. Ultimately, residents felt cynical about the whole idea of wellness, given this failed attempt.
"I think it actually made things worse because it made people more cynical about the whole thing, this idea, because we heard about all this wellness. "Wellness" was like a four-letter word." – Resident

Our point with this case study is not that yoga is a four-letter word either – only that the implementation is just as important as the intervention itself. Based upon hours of listening to and dissecting cases such as these, we have developed the following roadmap for wellness.

STEPS TO SUCCESS

STEP 1: ESTABLISH A WELLNESS COMMITTEE

Each program has its own set of needs and varies in response to different solutions. As such, it is important for program leaders and Wellness Champions to listen and collaborate closely with the residents to understand and tailor the interventions to the specific challenges in their program. Invite residents and staff to be part of the Wellness Committee. It is important that these individuals want to participate; forcing or coercing people to serve will likely have a negative impact on wellness. These individuals will be responsible for choosing what aspects of wellness to prioritize, selecting the most relevant interventions, and implementing them in a context-sensitive way.

"It's really important for the residents to have a voice in what they're doing because otherwise, they would just perceive it as people telling them to do something else. It can be onerous. They don't have buy-in. They don't have ownership over it. They're not excited about it."

– Attending

"I don't think you can just take a curriculum and dump it in somebody's lap. I think you have to have to have a team that's committed, and a culture that supports it, because if you don't, I think it's really hard to make it work."

– Attending

Considerations: Include resident representatives across different classes and a diversity of perspectives and experiences to volunteer (e.g., women, racial/ethnic minorities, residents with children). This will help ensure consistent implementation of the wellness initiatives, policies, and interventions over time (i.e., maintaining institutional memory through transition periods as residents graduate), sustain the momentum and grow the culture of wellness at the institution over time, and allow for the full range of resident perspectives, experiences and opinions to be represented and heard.

STEP 2: DESIGNATE A WELLNESS CHAMPION/ASSOCIATE PROGRAM DIRECTOR/VICE CHAIR

Identify a faculty member to serve as a Wellness Champion. This faculty member should be responsible for guiding the vision of wellness at your institution, advising the residents, and advocating for them as they implement interventions. This champion should be someone who is committed to the cause and has the leadership qualities necessary to lead and advocate for the residents (e.g., organized, strong leadership, effective communication skills, an understanding of the local climate and politics). The residents on the Wellness Committee may help to identify faculty members to serve as their faculty Champion.

Considerations: Protected time and resources (e.g., budget, staff) for the Wellness Champion will ease implementation. This role may be formalized by outlining job expectations and promotion criteria. These actions communicate to the department and the residency that leadership takes wellness seriously. See the Wellness Toolkit for a ready-to-implement job description. The Wellness Champion should not be the Program Director or the Department Chair; because of their roles within the hierarchy, these individuals may have difficulty soliciting truly honest feedback from residents about the program.

STEP 3: DETERMINE WHICH WELLNESS DOMAIN TO PRIORITIZE

You will receive an annual Resident Well-Being and Learning Environment Report from the SECOND Trial that benchmarks your program's performance on each of the seven wellness domains in our conceptual model. This report should identify the areas on which your program should focus attention. Interpret your results within the context of your program and discuss your report with your Wellness Committee. **Chapter 4 will explain in detail how to interpret your Learning Environment Report.**

Considerations: We recommend, but do not mandate, that you review your report with your residents in some way. You may consider options ranging from sharing a verbal summary or overview of the findings to sharing the file itself. Communicating with the broader audience will provide everyone with an opportunity to see the issues identified, to weigh in, to contribute additional ideas for solutions or ways to tailor the solutions to the local context, and simultaneously communicate that the program is prioritizing wellness and resident input. You may also want to review the report with other educational leadership (e.g., Vice Chair of Education, Department Chair, Designated Institutional Official, residency or GME psychologist, Chief Wellness Officer). We at the Coordinating Center are also available to help you interpret your results.

In order to determine your department's organizational readiness for a wellness intervention, consider administering a survey. In addition, consider conducting focus groups with residents to gain a richer understanding of the specific challenges within each domain from the residents' perspective. These focus groups may help inform which interventions should be implemented and how these solutions may be localized to your program. The faculty Wellness Champion should be responsible for leading these focus groups and should remember that the goal of these focus groups is to listen to and learn from the residents, rather than to communicate information to them. These conversations should probe the primary issues that matter to the residents, the impediments to their work and wellness, and what they think should be prioritized first. We have developed a ready-to-implement **Readiness Assessment Tool** (Appendix A) and **Focus Group Guide** (Appendix B) that programs may adapt for their institution.

STEP 4: CHOOSE A TARGETED INTERVENTION FROM THE TOOLKIT

Available in January 2020, the Wellness Toolkit is an online repository of ready-to-implement interventions, organized according to the Learning Environment domains. Within each domain, the SECOND Trial Wellness Toolkit has multiple subcategories (based on content), each with multiple interventions. Each intervention is rated according to:

1) Departmental readiness for change reflects the likelihood of existing-buy in, based upon our observations of surgical culture across multiple institutions. A session on resilience requiring faculty to share personal stories of vulnerability, while powerful, may be unrealistic if there is no culture of psychological safety in the department. Consider the acceptability of each intervention to the faculty in your program (e.g., think about the likely response of the leadership, the most curmudgeonly, the most benign, and the majority of your faculty). If the likelihood that your department is ready to participate/support the intervention is low, know that this is the biggest of all the potential barriers. See Appendix A for a ready-to-implement **Readiness Assessment Tool**.

2) Cost is an estimate of the monetary resources needed for the intervention.

3) Level of effort reflects the non-monetary resources needed. For example, a lactation policy requires private space that is easily accessible to your residents' workspaces, which may be difficult to find in your hospital.

4) Maslow's Hierarchy (Figure 4) conceptualizes needs as a pyramid, each category building upon the one below it. From the base to the top:

(1) Basic Physiological Needs
(2) Safety & Security
(3) Respect & Inclusion
(4) Appreciation
(5) Autonomy & Purpose

In our experience, programs that "skip" levels find their efforts fall on deaf ears. A complex professional development curriculum (level 5 - Autonomy & Purpose) seems irrelevant to residents who are fixated on not being able to eat during their night shifts (level 1- Basic Physiologic Needs) and/or having their belongings stolen while they are in the OR (level 2- Safety & Security). Start at the lowest level where there is an unmet need.

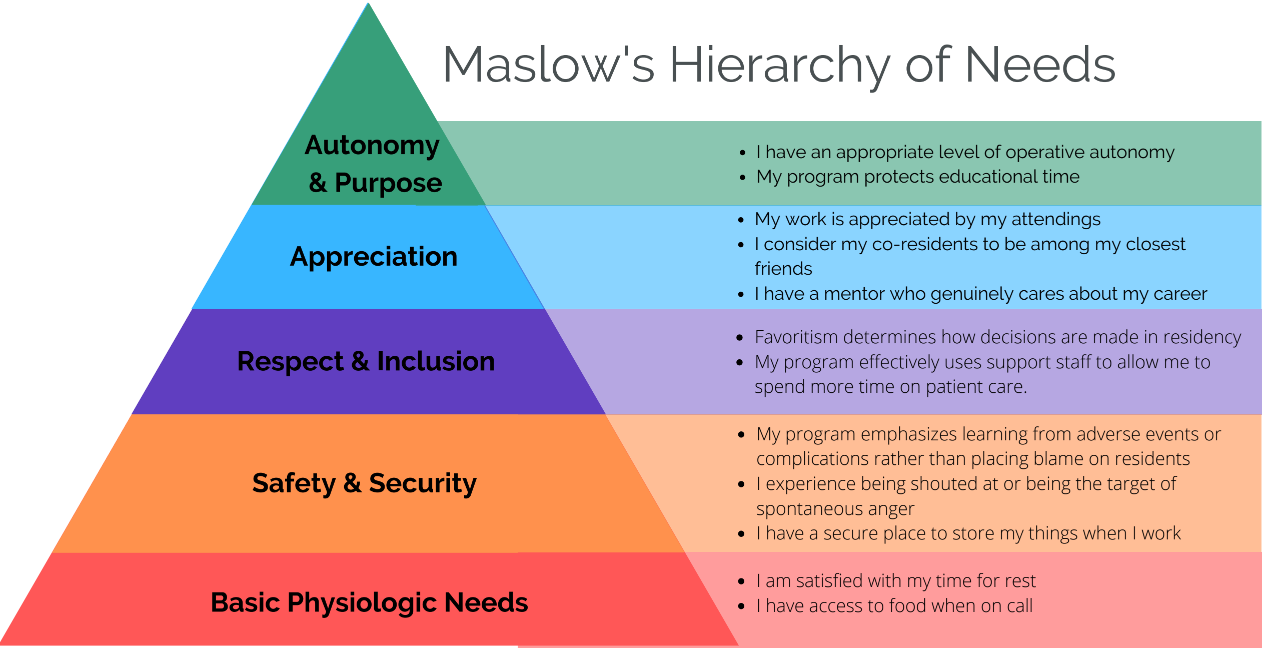


Figure 4. Maslow's Hierarchy of Needs, adapted for surgical residents.

5) Timeline: Meaningful interventions and culture change take time. The measure of each wellness intervention's impact may not be large in the early stages. Be patient and allow enough time for residents and faculty to see the value of an initiative and come to see it as integral to their experience. Programs we toured often quote 2 years for culture change/full implementation. That said, it may be helpful to start with some "small wins" to build up energy, enthusiasm, and support for wellness initiatives. Look for quick, easy, low-resource opportunities to remove hassles and inefficiencies in residents' work environments that prevent them from doing the work they find meaningful (i.e., the "pebbles in their shoes") or find opportunities to show them you value and appreciate them through small positive gestures.

One of the residents said, "It would be nice to recognize birthdays." It was on an anonymous survey, and I was like, "Well we [already] give them Christmas parties, we do all this other stuff – what do they mean?" Ironically, after it was put on the survey, it was my birthday, and I come into work, and on my desk, it's a General Surgery shirt, a little Starbucks card, and a Happy Birthday card that says, "Thank you for all your hard work." [The division leadership] does this for all the admins and all the faculty...I was like, "Wow, how nice is that!"...I came into my office, I was like, "It's my birthday. I've got like five million cases...and I feel really good." It made me happy...So, we started doing the same little thing [for residents]. You get a little card, you get an Amazon gift certificate, a little card that we wrote out recognizing your hard work: "Thank you, enjoy your special day, here's a gift certificate on us," or something. And it's just something little. It's just...a little recognition, and I think that makes you feel good for that day...Those things are small, but I think it just makes them feel cared for...I think that was a little morale booster.

– APD of Wellness

The Wellness Champion and Wellness Committee should browse the Toolkit and select the interventions that best address their needs, given their local strengths and challenges. Each intervention contains step-by-step instructions for implementation as well as templated resources (e.g., PowerPoint presentations, fill-in-the-blank policies).

STEP 5: IMPLEMENT THE CHOSEN WELLNESS INITIATIVE(S)

Based on the findings/input of your Wellness Committee and the advice of the Wellness Champion, you should have a handful of interventions selected from the Wellness Toolkit. The faculty Wellness Champion should empower the Wellness Committee with the support, leadership, and advocacy necessary to develop and implement the chosen initiative(s). The faculty Wellness Champion and Wellness Committee should meet regularly (every 1-4 months) to monitor ongoing progress.

We have developed an approach that starts with a popular QI method, the Model for Improvement [15] and then incorporates three implementation questions to create *The Model for Improvement and Implementation* (Figure 5) (MFII; see **Appendix C** for worksheet) [16]:

[15] Langley GJ, Moel R, Nolan KM, et al. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. 2nd ed. San Francisco, CA: Jossey-Bass; 2009.
[16] Ramaswamy R, Hirshhorn L, Johnson J. Integrating Implementation Science Approaches into Continuous Quality Improvement. In: Johnson JaS, W., ed. Continuous Quality Improvement in Health Care. 5th ed. Burlington, MA: Jones & Bartlett Learning; 2018.

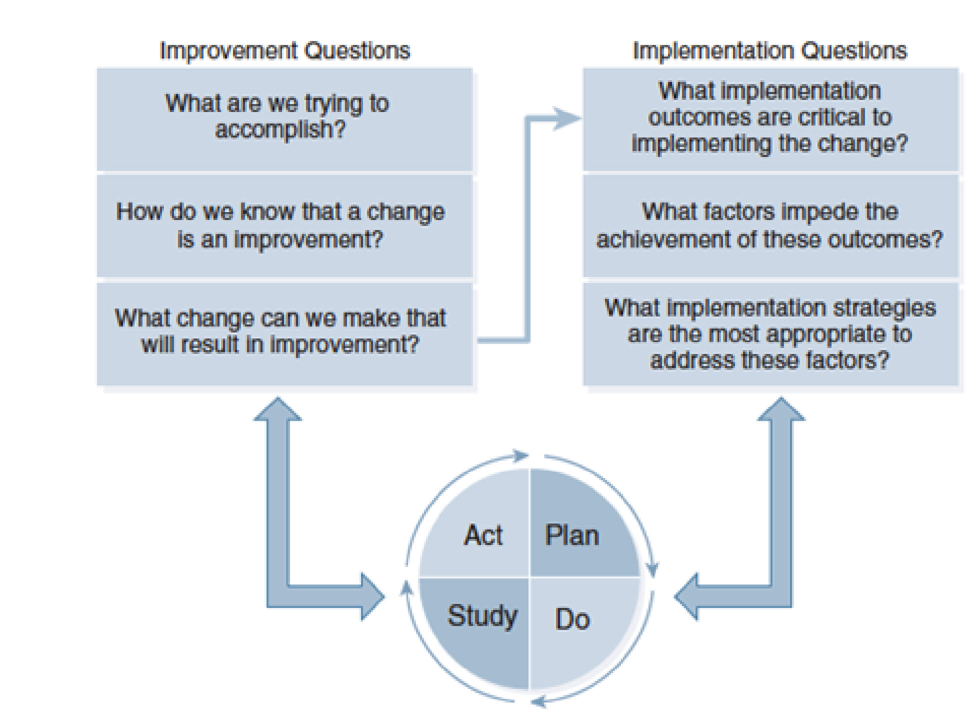


Figure 5. The Model for Improvement and Implementation

STEP 6: EVALUATE, ITERATE, AND REFINE

Gather feedback from residents after you implement the chosen wellness initiative(s). Based on this feedback, continue to iterate and refine your interventions to optimize their implementation and increase their impact. Periodically, re-assess and see where you can add.

The MFII worksheet (**Appendix C**) guides you into The Plan-Do-Study-Act (PDSA) cycle. The PDSA is a useful tool for testing changes to your intervention. You develop a plan to test the change (**Plan**), carry out the test (**Do**), observe, analyze, and learn from the test (**Study**), and determine what modifications, if any, to make for the next cycle (**Act**). One change should be enacted and tested per cycle.

One concern we've heard is that residents, especially new ones, don't appreciate the progress a program has made, and are continually asking for more.

"I think at this point, this residency is so established that way that [the residents] don't know anything else, and part of me thinks they don't know how good it is...They have attendings that are really supportive. They have a fridge that's stocked. They have food...I think there is a sense of, "This is the norm."...I wish they would all go and do three months somewhere else and then come back and [realize], "Oh, yeah, okay. This is good.""

– Program Director

We would instead put forth that continually asking for more is the nature of progress; we would expect that as initiatives become integrated into your residents' lives that they become less noticeable. This is a positive thing, as it indicates you are making progress on building well-being into your program's culture! Not so long ago, pregnancy in residency was taboo, but because programs (and the American Board of Surgery) have made strides in allowing parental leave, we now have an intervention for enabling lactation in the Toolkit. Although lactation is certainly "more" than childbearing, it's difficult to argue it represents "too much" rather than needed progress. As surgeons, we have always continued to innovate (e.g., robotics after laparoscopy), so it is natural that we will learn and continuously seek to advance in wellness, too.

STRATEGIES FOR SUCCESS

BRANDING YOUR WELLNESS INITIATIVES

Think about how the language used in your wellness initiative will be received by your program and consider tailoring it to be more palatable for surgeons. The extent to which the wellness interventions need to be rebranded or will need new language is likely dependent on the specific culture of your residency program. One program named their wellness program, "No Surgeon Left Behind," as a direct reference to the military, a stereotypical masculine and work-intensive discipline that appealed to their culture. Similarly, surgical residents may feel reluctant to see a psychologist or a psychiatrist, but might be more open to meeting with a professional coach or a sports psychologist.

> It doesn't matter if you read Brené Brown or the Navy Seals or Buddhist literature, the message is kind of the same, but the packaging is super different...I spent the last four years of my life saying, "How do I package this for surgeons?"
>
> – Faculty Wellness Champion

In addition, for all your initiatives, large and small, it is important to use consistent branding that associates the wellness initiative with your department's wellness program. This helps communicate to residents that these initiatives are all intentional changes that are part of the department's overall mission to improve wellness.

The Wellness Champion and the Wellness Committee should continually update the residency program on the issues they are working on and the progress they've made on each. Transparency will help the residents feel that their voices are being heard and that the program is taking their wellness seriously. Often the most important piece of an initiative is the demonstration that the department cares for its residents.

> I think, more than the concrete things, it's just a sense in the program that [resident wellness] is important. The fact that we see...faculty members and the program director investing time and resources in our wellness, I think it helps residents feel valued, in a way that it's easy to not feel valued when you're a resident and working really hard.
>
> – Resident

ADVOCATE FROM THE TOP DOWN

Leaders play a critical role in creating a culture that supports resident well-being. For wellness initiatives to be taken seriously, it is important for program leaders to show clear, explicit support for the interventions. Make leadership support of these initiatives visible. Include them as authors on all communications regarding these initiatives. Consider kicking-off implementation with an announcement or presentation at a departmental conference, e.g., Grand Rounds or M&M.

> You cannot do it in a vacuum. You really have to get everybody onboard...You can do it in spite of a couple people, but you have to have the leadership on an institutional level...say, "This is important, and we believe in this."
>
> – Attending

In addition to authentic engagement and support, it is important for the values of wellness to be modeled from the top down. Residents are much more likely to buy-in to the importance of wellness if they see the faculty they admire and respect demonstrating that wellness is an important facet of being a successful surgeon. For example, leadership may verbalize their support of work-life balance, but residents notice when faculty members make time for their families, exercise, and/or practice other forms of self-care. The hidden curriculum is just as important as the explicit, implemented one.

Department leaders should find ways to recognize and show appreciation for faculty members who take on active roles in supporting resident well-being and providing mentorship to residents (e.g., faculty mentorship awards).

> Faculty don't like to know that they're on the bad list with the residents or with medical students. Initially, I think there's a lot of doubling down and pride in the way they do things. Like, "Oh yeah, I like being the scary person." Then they watch other people get awards for being great mentors and teachers, and they're like, "Oh well, okay, maybe there's something to what other people are doing." That's the thing. You don't have to 100% buy-in; you just have to see the positive change that happens from it."
>
> – Resident

> I feel like it's a top-down approach. If the faculty are buying into it, then the residents buy into it, and then everyone buys into it. Of course, you're going to have some naysayers, and we hear it every once in a while, but I think for the most part almost all of our general surgery faculty definitely bought into it.
>
> – Resident

MEANINGFULLY PROTECT TIME FOR WELLNESS

Without protected time, it is hard for residents to take the time to prioritize wellness and incorporate it in their busy schedules.

"I think you have to carve out time for it. If you require them to come to things that are...outside their regular time, you're not going to get the participation you want."
– Wellness Champion

"I think the biggest challenge for everybody is that doing something for wellness becomes adding something else to your plate to do...Even if you provide something, they can't get to it... They're too busy. So what do you do for wellness that's not like something extra added on?"
– DIO

When programs offer protected time for certain wellness initiatives, it is important for leaders to be thoughtful about how the protected time is implemented.

"The half-days off are a good idea, although it sounds like on certain rotations they're really useless. In fact, the morning half-day off is not as feasible as an afternoon half-day off...We've realized that the ultimate currency of well-being programming is logistical timing. It's all about that. Is the time really protected? Because you can transform people into demi-gods in your hour of whatever, and if the time is not protected, it's not going to happen. And then...if there's competing interests, diminishing returns. If you put patient care in competition with the intervention, super diminishing returns. So, for these guys, they don't want their well-being half-day in the morning because they can't round on their service, they don't know what's going on, and nothing's tucked in. And, isn't that the kind of surgeon you want?"
– Attending

DON'T GET DISCOURAGED

As we said before, culture change takes a long time. Please remember:

Not everything is for everybody. Sometimes an intervention works for different reasons. Scheduled psychology meetings for each PGY class may create needed face-to-face with a clinician for some residents, but for others, it may just be a time to connect with one another; both are valuable. Sometimes an intervention works for some, but is meaningless for others. You increase your likelihood of success with a menu of options. Remember it is a small percentage of residents who are suicidal, and if you targeted only the majority, you might miss those critical few.

It's a moving target. Sometimes efforts to be responsive to some residents' needs are going to lead to complaints and dissatisfaction from other residents, which can be frustrating.

> If you listen every time to every single piece of feedback, there's no direction. You could fling 180 every year and then hit the wall every year...So, you need to find a little bit of a middle ground.
>
> – Program Director

A Wellness Committee and Wellness Champion may help sustain the institutional memory to prevent such swings; however, the nature of progress is such that we should expect some change regardless.

Residents usually, but don't always, know what's best for them. Sometimes it is important to implement wellness initiatives that are clearly good for resident health and well-being, even if they are not perceived the most favorably. For instance, residents have voiced that they don't want to go to regular health maintenance appointments, but there are objective health benefits – and moreover, a mandate from the ACGME. That said, **consider carefully what you make mandatory**. Forcing wellness is often counter-productive.

Finally, **you can do only what you can do**. Residents may not fully understand the logistical and/or budgetary trade-offs and limitations that programs face when trying to address resident wellness. We have observed that it is helpful to **engage and empower residents as active participants in a transparent decision-making process**, because it allows them to better understand and appreciate these considerations. More importantly, it shifts the perspective away from "us" vs. "them" thinking and helps foster a sense of collective responsibility in identifying solutions to address wellness ("We are in this together. What can we do to help?").

CONCLUSION

We hope that the SECOND Trial will help continue the national conversation on how to promote wellness in surgical residency training. We encourage programs to work together to develop new solutions for transforming the culture of surgical residency training.

PROGRAM TESTIMONIALS

To offer some encouragement that culture change is possible, here are some testimonials from program leadership, faculty, and residents.

"I think it has had returns slowly and subtly over the years...It's gone from 90% of the residents saying, 'I don't need to do that,' to 90% saying, 'It's kind of nice to do'...When it was 90% who didn't like it, I always told them, 'If you're going to help one person in your group, it's worth doing. It's worth spending that hour.' Now...I think it has actually lifted everybody up, and they enjoy going there and bonding with their classmates".

– Program Director

"Every year, the Dean would send out an evaluation survey to the faculty...The first year was like, 'Oh, [the chair] is always talking about culture, but there's no substance.' And the second year was still, 'Well, [the chair] talks about culture, but we don't really know where it's going'...Then they were like, 'We love where we're going, this culture is most important to us, we want to keep going on this path,' so that's how I knew we had gotten there."

– Department Chair

"Back then, the overall morale I'd see among the residents was very much the hierarchal system...the very traditional surgery program...It was still a good place to learn how to do surgery, but maybe not the best environment to do it in...I think the culture has changed...I think the whole mindset has shifted to more of a...team-based approach. Everybody's involved, everybody contributes...And everybody is onboard, everybody likes it...It's more of a learning environment; it's time for us to learn instead of being accusatory or defensive."

– Resident

"I remember the first meetings with [my Division Chief], where I was like, 'People are suffering.' And he was like...'Is this burnout shit even real?'...And then more recently, he was like, 'I just realized there's this richness to life that I have been without for decades and I don't want to miss out on any more of it'...So he didn't believe in burnout. He thought people who complained like that were just weak. [My Program Director] thought it was stupid...I think a lot of the faculty were unsure, but then when they started to do it, they were like, 'Ohh...'"

– Faculty Wellness Champion

"I would say the one thing we've changed is the culture...Like every other surgical program or every surgeon, even our residents at the very beginning...were all skeptical about this well-being stuff...I explain to people, 'Listen, not everyone is just going to buy-in right away'...Some of the residents are not going to bite. Some of the attendings – most of the attendings – are not going to bite. But it's persistence and structure."

– Program Director

CHAPTER 4: UNDERSTANDING OUR RESIDENT WELL-BEING & LEARNING ENVIRONMENT REPORT

Well-being & Learning Environment Reports

The department chair, program director, and designated institution official of each program will receive your program-specific Resident Well-Being and Learning Environment Report.

- Your **Program Number** is your unique SECOND Trial identifier.
- Your **Program Size** (small, medium, large) is the number of residents in your program, categorized into national terciles.
- Your **Program Type** (Academic vs Community) is determined by the American Board of Surgery. Because there were too few Military programs to benchmark them separately, we asked Military programs to self-categorize as either Academic or Community.

2019 SECOND TRIAL LEARNING ENVIRONMENT & RESIDENT WELL-BEING REPORT

SECOND Trial Program Number:	1670
Program Size:	Large (>27 residents)
Program Type:	Academic

Figure 6. Your Demographics: Program Number, Size, and Type

The **Well-Being items in the Report** (Table 4) include targeted feedback on how your program is performing compared with other programs in the country on 3 well-being outcomes:

(1) Burnout – We use a modified version of Maslach's Burnout Inventory (MBI) that has subscales: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Each subscale contains 3 items, each of which is measured on a scale of 1-7. We provide feedback on your burnout rate, based upon the percentage of residents in the program who report experiencing at least 1 item in either the Emotional Exhaustion or Depersonalization subscale on an at least weekly basis.[17] (As per prior research in healthcare, we do not include the Personal Accomplishment domain as physicians generally score well on it.) We also provide your performance on the MBI subscales, again based on the percentage of residents endorsing at least 1 item on an at least weekly basis.

(2) Thoughts of Leaving Your Program – These data are reported based upon the percentage of residents in the program reporting agree or strongly agree.

[17] Dyrbye LN, Burke SE, Hardemann RR, et al. Association of clinical specialty with symptoms of burnout and career choice regret among US resident physicians. JAMA 2018;320:114-30.

(3) Thoughts of Suicide – These data are reported based upon the percentage of residents in the program reporting agree or strongly agree.

	Your Program's Performance Quartile		
	Compared to All Programs in the Country	Compared to Large (>27 residents) Sized Programs	Compared to Academic Programs
Burnout (6-Item Composite)	Q3	Q3	Q3
Emotional Exhaustion (3-Item Composite)	Q3	Q3	Q3
Depersonalization (3-Item Composite)	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Personal Accomplishment (3-Item Composite)	Q2	Q3	Q2
Thoughts of Attrition	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Suicidal Thoughts	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary

Table 4. Resident Well-Being Items in the Report

The **Learning Environment items in the Report** (Table 5) include targeted feedback on how your program is performing compared with other programs in the country on 8 Learning Environment domains. Each domain is comprised of multiple component items that are summarized with a single composite score.

(4) Workload & Job Demands – This domain measures compliance with 3 different work hour restrictions. 80-hour workweek violations are reported as the percentage of residents in the program who reported any in the past 6 months, as the ACGME now considers these violations "never" events. The 1 day off in 7 and >1 call every 3 violations are reported as the percentage of residents in the program who reported ≥2 in the past 6 months. The composite score is a weighted average of the 3 items.

(5) Resident Camaraderie – This domain contains 3 items, each of which is reported in terms of the average resident score on a 5-point Likert scale, in which 4 indicates 'agree' and 5 'strongly agree.' The composite score is a weighted average across all 3 items.

(6) Faculty Engagement – This domain contains 2 items, each of which is reported in terms of the average resident score on a 5-point Likert scale, in which 4 indicates 'agree' and 5 'strongly agree.' The composite score is a weighted average across both items.

(7) Organizational Culture & Values/Control & Flexibility – This domain contains 6 items, each of which is reported in terms of the average resident score on a 5-point Likert scale, in which 4 indicates 'agree' and 5 'strongly agree.' The composite score is a weighted average across the first 4 items; the 5th (regarding perception of burnout in the program) and 6th (regarding favoritism) did not load onto any domain in our Confirmatory Factor Analysis and thus do not contribute to the composite score of any domain.

(8) Efficiency & Resources – This domain contains 3 items, each of which is reported in terms of the average resident score on a 5-point Likert scale, in which 4 indicates 'agree' and 5 'strongly agree.' The composite score is a weighted average across all 3 items.

(9) Meaning in Work – This domain contains 5 items, each of which is reported in terms of the average resident score on a 5-point Likert scale, in which 4 indicates 'agree' and 5 'strongly agree.' The composite score is a weighted average across the first 4 items; the 5th (regarding quality of resident education) did not load onto any domain in our Confirmatory Factor Analysis and thus does not contribute to the composite score of any domain.

Workload & Job Demands (3-Item Composite)	Q3	Q2	Q2
80-hour violations	Q3	Q2	Q2
1 day off in 7 violations	Q3	Q3	Q3
Call >1 in 3 nights violations	Q3	Q3	Q3
Resident Camaraderie (3-Item Composite)	Q2	Q2	Q2
Appreciated by co-residents	Q3	Q3	Q3
Residents cooperate	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Co-residents among closest friends	Q1: Exemplary	Q1: Exemplary	Q2
Faculty Engagement (2-Item Composite)	Q2	Q2	Q2
A mentor who genuinely cares	Q2	Q2	Q2
Appreciated by attendings	Q3	Q3	Q3
Organizational Culture & Values/Flexibility & Control (4-Item Composite)	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Program takes my wellness seriously	Q2	Q2	Q2
Program helps decompress/debrief/cope after adverse events	Q2	Q1: Exemplary	Q1: Exemplary
Program emphasizes learning not blame from adverse events	Q2	Q1: Exemplary	Q1: Exemplary
Program responsive to resident concerns	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Burnout is a problem in my program (reverse-coded so higher scores better)	Q3	Q3	Q3
Decisions made by favoritism (reverse-coded so higher scores better)	Q2	Q1: Exemplary	Q2
Efficiency/Resources (3-Item Composite)	Q2	Q1: Exemplary	Q1: Exemplary
Effective support staff allows time for patient care	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Program protects educational time	Q2	Q2	Q2
Time for direct patient care after admin tasks	Q3	Q3	Q3
Meaning in Work (4-Item Composite)	Q2	Q1: Exemplary	Q1: Exemplary
Appropriate time in OR	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Appropriate operative autonomy	Q2	Q2	Q2
Appropriate clinical autonomy	Q2	Q1: Exemplary	Q1: Exemplary
Satisfied with decision to be a surgeon	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Satisfied with quality of resident education	Q1: Exemplary	Q1: Exemplary	Q1: Exemplary

Table 5. Learning Environment Items in the Report

(10) Mistreatment – This domain has 4 subscales (Table 6):

a. Bullying consists of the 9-item Short-Negative Acts Questionnaire plus an additional item ("being cursed at"). Each item is reported based upon the percentage of residents in the program reporting any occurrences. The composite is reported based upon the percentage of residents in the program reporting any behavior within the S-NAQ.

b. Sexual Harassment consists of 6 items. Each item is based upon the percentage of women within the program reporting any occurrences. The composite is reported based upon the percentage of residents in the program reporting any of the component behaviors. There are two composites reported: one for all residents, and one for women.

c. Gender Discrimination consists of 7 items. Each item is based upon the percentage of women within the program reporting any occurrences. The composite is reported based upon the percentage of residents in the program reporting any of the component behaviors. There are two composites reported: one for all residents, and one for women.

d. Racial/Ethnic Discrimination consists of 6 items. Each item is based upon the percentage of non-whites within the program reporting any occurrences. The composite is reported based upon the percentage of residents in the program reporting any of the component behaviors. There are two composites reported: one for all residents, and one for non-whites.

The composite **Mistreatment** score is a weighted average of the 4 subscale scores for the entire sample (i.e., including men who have experienced sexual harassment and gender discrimination and non-whites who have experienced racial/ethnic discrimination).

A 5th domain, **Resident Knowledge about Reporting**, consists of 4 items. The percentage of residents reporting "no" is reported.

Mistreatment (4-Domain Composite)	7.7-29.4	29.4-39.2	Factor Score on 0-100 Scale
Bullying (9-Behavior Composite)	8.0-67.9	68.0-100.0	% Reporting Any Occurrence
Withholding information that affects your performance	0.0-37.4	37.5-100.0	% Reporting Any Occurrence
Spreading gossip/rumors	0.0-37.4	37.5-100.0	% Reporting Any Occurrence
Being ignored/excluded	0.0-35.9	36.0-100.0	% Reporting Any Occurrence
Insulting/offensive remarks	0.0-27.9	28.0-100.0	% Reporting Any Occurrence
Being shouted at	0.0-45.6	45.7-100.0	% Reporting Any Occurrence
Repeated reminders of errors	0.0-49.9	50.0-100.0	% Reporting Any Occurrence
Being ignored/facing hostile reaction when approaching	0.0-29.1	29.2-100.0	% Reporting Any Occurrence
Persistent criticism of work/effort	0.0-36.3	36.4-100.0	% Reporting Any Occurrence
Practical jokes carried out by people you don't get along with	0.0-12.4	12.5-50.0	% Reporting Any Occurrence
*Being cursed at**	0.0-28.5	28.6-100.0	% Reporting Any Occurrence
Sexual Harassment (6-Behavior Composite for Full Sample)	0.0-34.9	35.0-100.0	% Reporting Any Occurrence
Sexual Harassment (6-Behavior Composite for Females Only)†	0.0-52.8	52.9-100.0	% Female Residents Reporting Any
Crude/sexually demeaning remarks, stories, jokes †	0.0-46.6	46.7-100.0	% Female Residents Reporting Any
Unwanted sexual imagery or materials sent or shown to you †	0.0-5.9	6.0-66.7	% Female Residents Reporting Any
Unwanted verbal sexual attention (e.g., flirtations, advances) †	0.0-26.6	26.7-100.0	% Female Residents Reporting Any
Offensive body language (e.g., leering, standing too close) †	0.0-21.3	21.4-100.0	% Female Residents Reporting Any
Unwanted physical sexual attention (e.g., inappropriate touching) †	0.0-7.6	7.7-100.0	% Female Residents Reporting Any
Sexual coercion (e.g., bribery) †	0.0-0.0	0.1-33.3	% Female Residents Reporting Any
Gender Discrimination (7-Behavior Composite for Full Sample)	0.0-49.2	49.3-89.9	% Reporting Any Occurrence
Gender Discrimination (7-Behavior Composite for Females Only)†	0.0-88.8	88.9-100.0	% Female Residents Reporting Any
Different standards of evaluation †	0.0-52.5	52.6-100.0	% Female Residents Reporting Any
Denied opportunities †	0.0-26.6	26.7-100.0	% Female Residents Reporting Any
Mistaken for non-physician †	0.0-86.6	86.7-100.0	% Female Residents Reporting Any
Slurs or negative comments even jokes †	0.0-32.9	33.0-100.0	% Female Residents Reporting Any
Socially isolated †	0.0-17.5	17.6-100.0	% Female Residents Reporting Any
Advised against having children †	0.0-38.4	38.5-100.0	% Female Residents Reporting Any
Negative reactions to pregnancy or childcare †	0.0-9.0	9.1-100.0	% Female Residents Reporting Any
Racial Discrimination (6-Behavior Composite for Full Sample)	0.0-28.9	29.0-75.0	% Reporting Any Occurrence
Racial Discrimination (6-Behavior Composite for Non-Whites Only)‡	0.0-51.9	52.0-100.0	% Non-White Residents Reporting Any
Different standards of evaluation ‡	0.0-21.9	22.0-100.0	% Non-White Residents Reporting Any
Denied opportunities ‡	0.0-9.9	10.0-100.0	% Non-White Residents Reporting Any
Mistaken for non-physician ‡	0.0-27.2	27.3-100.0	% Non-White Residents Reporting Any
Slurs or negative comments even purported as jokes ‡	0.0-17.5	17.6-100.0	% Non-White Residents Reporting Any
Socially isolated ‡	0.0-3.9	4.0-100.0	% Non-White Residents Reporting Any
Mistaken for another of same race ‡	0.0-44.3	44.4-100.0	% Non-White Residents Reporting Any
Resident Knowledge about Reporting Mistreatment			
Prepared to respond when mistreated	0.0-24.9	25.0-100.0	% Reporting "No"
Comfortable reporting mistreatment	0.0-23.9	24.0-64.0	% Reporting "No"
Know how to report mistreatment	0.0-20.9	21.0-57.0	% Reporting "No"
Institution would take the report seriously	0.0-20.9	21.0-52.0	% Reporting "No"

Table 6. Learning Environment Report: Mistreatment Subscales

To protect resident confidentiality, the reports do not give programs their exact percentage of residents who reported any particular measure. Rather, all data, except that regarding mistreatment, are reported in terms of quartiles (i.e., your ranking (top, 2d, 3rd, or 4th quartile)), compared to:

- All ACGME-accredited general surgery programs
- Programs of comparable size (small, medium, large)
- Programs of the same type (academic or community)

Your Program's Performance		
Compared to All Programs in the Country	Compared to Large (>27 residents) Sized Programs	Compared to Academic Programs
Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Not an Outlier	Not an Outlier	Not an Outlier
Not an Outlier	Not an Outlier	Not an Outlier

Table 7. Program Performance Quartile

Mistreatment measures are dichotomized (i.e., "not an outlier" vs "outlier") (Table 8). Quartiles were not statistically possible, given the rarity of many of these occurrences and/or the clustering of most programs within a narrow range of rates. We emphasize that non-outlier performance does not necessarily indicate that the status quo is acceptable, as a rate deemed "not an outlier" may still be quite high. For example, "unwanted physical sexual attention (e.g., inappropriate touching") could appropriately be considered a "never" event; falling below the threshold for "outlier" status but above zero still requires attention. Finally, to protect resident confidentiality, we suppress data for gender-related and race-related items for programs with ≤4 female or ≤non-white residents, respectively.

	Your Program's Performance		
	Compared to All Programs in the Country	Compared to Large (>27 residents) Sized Programs	Compared to Academic Programs
Mistreatment (4-Domain Composite)	Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Bullying (9-Behavior Composite)	Not an Outlier	Not an Outlier	Not an Outlier
Withholding information that affects your performance	Not an Outlier	Not an Outlier	Not an Outlier
Spreading gossip/rumors	Not an Outlier	Not an Outlier	Not an Outlier
Being ignored/excluded	Not an Outlier	Not an Outlier	Not an Outlier
Insulting/offensive remarks	Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Being shouted at	Not an Outlier	Not an Outlier	Not an Outlier
Repeated reminders of errors	Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Being ignored/facing hostile reaction when approaching	Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Persistent criticism of work/effort	Not an Outlier	Not an Outlier	Not an Outlier
Practical jokes carried out by people you don't get along with	Not an Outlier	Not an Outlier	Not an Outlier
*Being cursed at**	Not an Outlier	Not an Outlier	Not an Outlier

Table 8. Mistreatment Outliers v. Non-Outliers

If your program is in the top quartile for any particular metric, that metric is highlighted in green ("Exemplary Performance)." If your program ranks at the bottom for any particular metric (within the 4th quartile or an outlier), that metric is highlighted in red ("Merits Attention") (Table 9). Of note, it is possible to have a worse ranking on the composite than the component items. For example, if 70% of your program reports experiencing "crude/sexual demeaning remarks, stories, or jokes," you will fall just below the outlier threshold of 85.7% for that item; however, you will fall above the sexual harassment composite threshold of 49.3%. Additionally, if 30% of your program reports "crude/sexual demeaning remarks, stories, or jokes" and 20% report "offensive body language" (neither an outlier), and these are non-overlapping groups of residents (i.e., 50% report one or the other, but 0% report both), then you will be an outlier for sexual harassment as a whole.

Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Q2	Q2	Q2
Q2	Q1: Exemplary	Q1: Exemplary
Q2	Q1: Exemplary	Q1: Exemplary
Q1: Exemplary	Q1: Exemplary	Q1: Exemplary
Q3		
Q2	Q1: Ex	

Not an Outlier	Not an Outlier	Not an Outlier
Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Not an Outlier	Outlier: Merits Attention	Outlier: Merits Attention
Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention
Not an Outlier	Not an Outlier	Not an Outlier
Outlier: Merits Attention	Outlier: Merits Attention	Outlier: Merits Attention

Table 9. Performance Exemplary & Merits Attention

We also include the ranges for each quartile (Table 10). The maximum and minimum numbers shown reflect the extremes of performance within the country. For example, there are programs with a 0% burnout rate, but 0 programs with a 100% burnout rate; the highest rate is 86%. Of note, higher scores reflect worse performance for burnout, attrition, suicidality, Workload & Job Demands, and Mistreatment, while higher scores reflect better performance for Resident Camaraderie, Faculty Engagement, Organizational Culture & Values/Control & Flexibility, Efficiency & Resources, and Meaning in Work.

Benchmarks: Ranges for Each Quartile for All Programs in the Country				
Q1 Range	**Q2 Range**	**Q3 Range**	**Q4 Range**	**Unit of Measurement**
0.0-29.9	30.0-41.9	42.0-52.9	53.0-86.0	% Reporting at least Weekly Symptoms
0.0-27.9	28.0-37.9	38.0-47.9	48.0-79.0	% Reporting at least Weekly Symptoms
0.0-13.9	14.0-21.9	22.0-29.9	30.0-71.0	% Reporting at least Weekly Symptoms
96.0-100.0	91.0-95.9	84.0-90.9	53.0-83.9	% Reporting at least Weekly Sentiments
0.0-5.3	5.4-10.8	10.9-15.8	15.9-57.9	% Reporting Occurrence
0.0-0.0	0.1-3.2	3.3-6.9	7.0-33.3	% Reporting Occurrence

Table 10. Benchmarks: Ranges for each quartile

We highly recommend, but do not mandate, sharing your data with your residents in some way (e.g., Wellness Committee). They are best suited for helping you make sense of your program's strengths and weaknesses. You may also want to review the report with other educational leadership, (e.g., Vice Chair of Education, Department Chair, Designated Institutional Official, residency or GME psychologist, Chief Wellness Officer). We at the Coordinating Center are also available to help you interpret your results; please contact us at **SECOND@northwestern.edu** with any questions.

This is an initial foray into providing these types of reports, and there are likely many opportunities and many great ideas that will arise as programs examine their reports. We truly welcome any feedback about the interpretability and/or content of these reports. We would love to hear about any new ideas you may have as well. These reports are meant to serve you and your program, and we want to ensure that they are as useful as possible. We will send a second data release with further granularity (e.g., the sources of mistreatment in your program) within the coming months. These metrics will continue to evolve as we continue to learn about wellness in surgical residents; we anticipate that we will make modifications to the questions in the annual ABSITE survey and therefore your data reports accordingly.

APPENDIX A

A needs assessment is a way to understand what is most important to the "key stakeholders" or those who will be affected by the intervention. Numerous tools have been developed to assess organizational readiness;[18-21] however, it is important to use a tool that is specific to residency wellness. A readiness assessment may be used as part of implementation process to help "unfreeze" the mindset of the organization and create motivation for change. Engagement and buy-in are essential for implementation. Research has shown that when employees exhibit readiness to change, they are more persistent in the face of obstacles to successfully implementing change.[22]

The Readiness Assessment Tool (RAT) included here is a two-part self-diagnostic tool to assist your Wellness Committee to get ready to implement a wellness initiative. If you have already implemented an initiative, this tool can be used to identify areas that need to be strengthened or to prepare for your next initiative.

Section 1 assesses Wellness Committee readiness. Are there areas where the Committee needs more support or guidance? Does the Committee have the institutional and leadership support needed for successful implementation?

Section 2 asks about residents and faculty in your department. These questions will help you think about the level of engagement and buy-in that you have for wellness initiatives.

How to interpret the results of the RAT

The RAT can be a conversation starter. The goal, of course, is that you are able to "strongly agree" with each of the statements in the assessment tool. Scoring less than 5 means that you have identified areas that can be strengthened to increase the likelihood of successful implementation.

Once you have completed the tool, the Wellness Committee should discuss areas where the score is low (1-3) for any question. For example, if you scored 2 on "We have a mechanism in place to share concerns about implementation", what can the Committee do to address this issue prior to implementation?

[18] Aarons GA, Horowitz JD, Dlugosz LR, Ehrhart MG. The role of organizational processes in dissemination and implementation research. Dissemination and implementation research in health: Translating science to practice. 2012 Apr 19;128:153.

[19] Gagnon MP, Attieh R, Ghandour EK, Legare F, Ouimet M, Estabrooks CA, Grimshaw J. A systematic review of instruments to assess organizational readiness for knowledge translation in health care. PLoS One. 2014 Dec 4;9(12):e114338.

[20] Lehman WE, Greener JM, Simpson DD. Assessing organizational readiness for change. Journal of substance abuse treatment. 2002 Jun 1;22(4):197-209.

[21Flottorp SA, Oxman AD, Krause J, Musila NR, Wensing M, Godycki-Cwirko M, Baker R, Eccles MP. A checklist for identifying determinants of practice: a systematic review and
synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. Implementation Science. 2013 Dec;8(1):35.

[22] Armenakis, Harris. Change Management In: Kotter J, ed. Leading Change: Harvard Business Review Press; 1996

READINESS ASSESSMENT TOOL

Section 1. Wellness Committee

How strongly do you agree or disagree with each of the following statements?

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
Our Wellness Committee needs guidance in:					
Setting specific goals for implementing a wellness initiative	1	2	3	4	5
Assigning or clarifying Committee roles	1	2	3	4	5
Selecting or engaging a faculty Wellness Champion	1	2	3	4	5
Gaining buy-in from leadership	1	2	3	4	5
Gaining buy-in from faculty	1	2	3	4	5
Collecting perspectives from the residents	1	2	3	4	5
Understanding local culture	1	2	3	4	5

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
The Wellness Committee has the mandate and authority to make necessary changes required for implementation of the initiative(s).	1	2	3	4	5
The Wellness Committee has the resources to implement desired initiative(s).	1	2	3	4	5

READINESS ASSESSMENT TOOL

Section 2. Departmental Readiness	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
In our department:					
Faculty believe that improving resident wellness will allow residents to provide better care for our patients.	1	2	3	4	5
Residents believe that improving resident wellness will allow residents to provide better care for our patients.	1	2	3	4	5
Faculty think that resident wellness will be beneficial for them personally.	1	2	3	4	5
Residents think that resident wellness will be beneficial for them personally.	1	2	3	4	5
Even when the residents are reluctant to try new ideas, they will try if others think it is a good idea.	1	2	3	4	5
We have mechanisms in place for residents to share concerns about implementation of the initiatives.	1	2	3	4	5
The residents have formal and informal communication channels that work well.	1	2	3	4	5
Mutual trust and cooperation among residents is strong.	1	2	3	4	5
Our faculty trust and respect residents' opinions and/or their ability to decide what's best for themselves.	1	2	3	4	5

APPENDIX B

Focus groups are semi-structured interviews conducted with a small group (8-10) of people. They are another form of needs assessment that allows you to understand the "voice" of your key stakeholders. First, you will need to decide what you want to learn from the focus group and develop a focus group guide (see the example guide below). Second, create an environment for the focus group in which the participants may converse while responding to the questions. (Providing food is always a good idea.) Third, summarize what you learn from the participants.

Principles for Conducting Focus Groups (adapted from the Institute for Healthcare Improvement (IHI) Framework for Improving Joy in Work [23]):

- Ask the question, listen to the first response, and then allow for deeper reflection about initial comments. Be comfortable with silence; practice curiosity and inquiry to listen — not just to hear, but also to understand.
- You do not have to fix or explain everything now — the intention of the conversation is listening to understand what matters; they, not you, should do most of the talking. Allow criticism and be mindful about becoming defensive.
- Ensure that this is a participative process with residents — not to or for them.
- Don't assume you know what the residents are thinking or experiencing. Try to assume positive intent. They are likely not just trying to work less; it is possible to increase engagement without decreasing work effort, education, or patient care (see Chapter 2).
- Don't promise to fix everything.
- Don't just do this as a one-time activity.
- Don't talk to just those who are positive and avoid the negative voices. Be inclusive
- and gather a diversity of perspectives (e.g., different PGY classes, genders, races, phases of life).
- Don't allow a single person to do all the talking. You may have more success with eliciting feedback from junior residents if you conduct their focus groups separately from senior residents.
- Don't feel the need to immediately solve every issue discussed.
- Emphasize that this is about ongoing improvement in the program, not a one-time fix.
- Capture what you are hearing so it's visible (e.g., on a whiteboard) – circulate your findings from the focus group to all residents and welcome their thoughts and feedback.

[23] Perlo J, Balik B, Swenson S, Kabcenell A, Landsman J, Feeley DI. IHI framework for improving joy in work.

FOCUS GROUP GUIDE

This guide is intended to help Wellness Champions conduct a focus group with residents to better understand the residents' perspectives on the primary issues that matter to them. These focus groups may help inform which interventions should be implemented and how these solutions may be localized to your program.

FOCUS GROUP PROMPTS

- What do you think are the specific challenges to resident well-being in this program?
- What are the primary issues that matter to the residents?
- What are the impediments to residents' work and wellness in this program?
- What gets in the way of your work? What makes you crazy (the "pebbles in your shoes")?
- Of all of the issues suggested, what are the most important ones? What should we prioritize first?
- Is there something we can do to address these issues right away? Any suggestions for solutions that are quick wins?
- Of all of the solutions (initiatives, policies, interventions) suggested, which solutions do you think are most meaningful?
- Of all of the solutions suggested, which ones are you most willing to test?
- What do you see as the major barriers?

FOLLOW-UP PROMPTS

- Invite others to comment on an individual's response
- To move from broad comments, ask participants to be more specific and to identify some ideas you might test as a starting point:
    - "Help me understand what that looks like?"
    - "Can you give me an example of that?"
- When one person is dominating the conversation, thank them for their comments and suggest:
    - "Let's hear from others on the team."
- Acknowledge what you are hearing and make sure you got their perspective right. It may be helpful to briefly relay similar experiences of yours when relevant, provided they do not contradict or derail the conversation.
    - "The thing that frustrates you is...Did I get that right?"

APPENDIX C

You can use the MFII worksheet for each change to an intervention you plan to implement. Keep a file (either electronic or hard copy) of all worksheets as an easy way to document your progress.

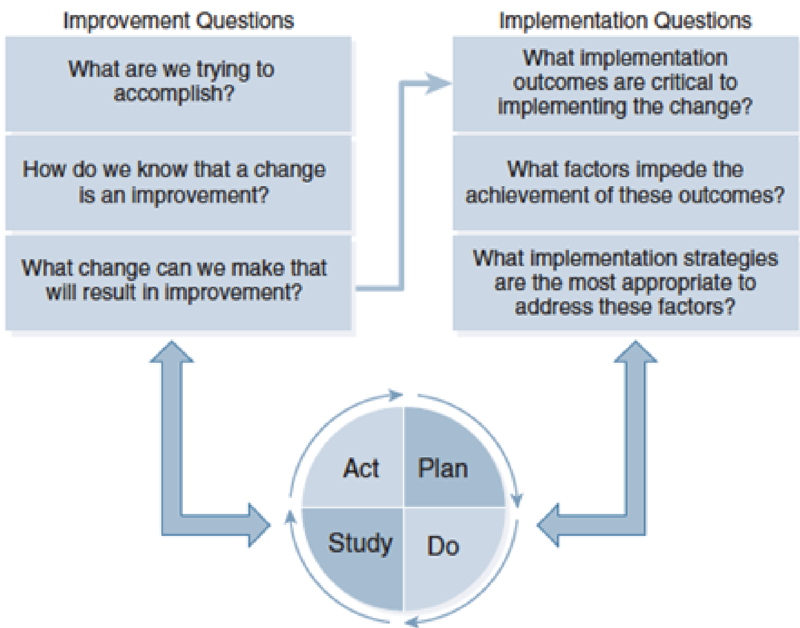


Figure 5. The Model for Improvement and Implementation

Before you start implementing an initiative, consider the following Improvement Questions:

1. What are we trying to accomplish?

This will be the specific issue identified by your Wellness Committee within a domain in which your program performed poorly on the Well-Being and Learning Environment Report.

2. How do we know that a change is an improvement?

While your annual Well-Being and Learning Environment Report will tell you whether you've improved on any particular domain, you may be interested in whether your intervention has impacted the specific issue identified in #1 and/or data gathered at more frequent intervals. Different mechanisms for assessing change at a more granular level include surveys and repeat focus groups. Many of the interventions within the Wellness Toolkit contain sample surveys.

3. What change can we make that will result in improvement?

Your Wellness Champion and Wellness Committee should review the options in the Wellness Toolkit and determine which is most likely to impact the specific issue identified in #1 as well as the following Implementation Questions:

4. What implementation outcomes – including acceptability, appropriateness, and sustainability – are critical to implementing the change?

Consider feasibility – Think about what your committee needs to successfully implement the intervention they've chosen: whose support, what resources, etc.

5. What factors impede the achievement of these outcomes?

Think about potential barriers that you identified through the readiness assessment and focus groups.

6. What implementation strategies are the most appropriate to address these barriers?

Brainstorm potential solutions to the barriers. Again, lack of buy-in may be the most difficult problem to surmount, so use our Toolkit's Maslow's and Departmental Readiness for Change filters to help you choose your intervention wisely.

Plan

Come up with action items from questions 3, 4, and 6. What are the tasks that need to be completed to implement the wellness initiative (or changes to it)?

Do

Implement your initiative (or changes to your initiative), with careful attention to your action items.

Study

Evaluate the metrics you've chosen from question 2. Remember your Well-Being and Learning Envrionment Report will only occur annually, and you may want to assess your performance more frequently so you respond in a more timely fashion.

Act

Enact changes needed to respond to the results of your Study step.

Figure 7. Plan, Do, Study, Act: Steps to Implementation