



BURNOUT IN PRIMARY CARE

ASSESSING AND ADDRESSING IT IN YOUR PRACTICE

Burnout is a serious and growing problem in primary care practices.

Burnout is a workplace-based condition where people experience overwhelming exhaustion, cynicism and detachment from the job, and ineffectiveness.^{1, 2} The personal consequences can be severe, including higher rates of alcohol and drug use, divorce, and suicide.^{3, 4} Burnout can increase worker turnover and reduce the quality of care, leading to lower patient satisfaction and patient safety as well as higher costs of care.^{1, 5-7}

Primary care administrators and leaders can use this resource to learn about:

- ▶ **Information** about burnout and the importance of taking an organizational approach
- ▶ **Tools** practices can use for assessing burnout
- ▶ **Strategies** practices can tailor to prevent and reduce staff burnout and increase well-being
- ▶ **Additional resources** for understanding and preventing burnout among healthcare providers



In 2020, 38 percent of physicians in the U.S. reported experiencing at least one of the three dimensions of burnout, and primary care physicians have higher rates of burnout than most other types of physicians.^{5, 8}

The concern is most acute for females and those under age 55.^{9, 10} Other clinicians, such as nurse practitioners (NPs) and physician assistants (PAs), experience similar levels of burnout compared with physicians.^{6, 11} Although burnout is less prevalent among clinical and non-clinical support staff in primary care, these groups also experience it.^{6, 11, 12} High rates of burnout in primary care are perhaps not surprising given ongoing strains to the system, such as workforce shortages, an aging population with increasingly complex medical needs, the difficulties of providing coordinated care in a fragmented system, and declining financial margins.

The COVID-19 pandemic has made the problem of burnout in primary care worse by adding COVID safety precautions along with the demand for COVID testing and vaccinations to the existing workload, as well as creating increases in pandemic-related anxiety.¹³⁻¹⁵ In a 2021 survey, 71 percent of primary care clinicians reported that their burnout or mental exhaustion had reached an all-time high during the pandemic, and one in four primary care clinicians reported they intend to leave practice over the next several years.¹⁶ **Now more than ever, effectively addressing burnout in primary care is critical.**



Akin to the patient safety and quality movement of the 1990s that transformed care delivery, not by asking individual clinicians to try harder, but by building safer systems, today's growing clinician well-being movement will be most successful not by admonishing individual clinicians to be more resilient, but by creating more resilient organizations.²²



Addressing the Sources of Burnout

Historically, programs to address burnout in healthcare settings have focused on helping individuals cope with stress (for example, stress management and mindfulness programs).^{5, 17, 18} Although these approaches can be effective for participants,^{5, 19} they do not address the underlying workplace issues that cause staff to experience burnout.

Burnout is expensive for practices and health systems because of costs related to turnover of clinicians and other staff, as well as reduced clinical hours. (See a [tool](#) for calculating the organizational costs of physician burnout.) Practices and health systems therefore have an economic incentive to invest in strategies to reduce burnout.²⁰ Organizations that make these investments and promote staff well-being reap the benefits of having an engaged workforce capable of delivering high-quality and efficient healthcare.²¹ In addition, even modest investments have been found to have large impacts. Some strategies are cost-neutral or even revenue generating, and some may simultaneously improve patient care or satisfaction.^{21, 22}

This resource is focused on what can be done at an organizational or practice level to address burnout.







Assessing Burnout

Understanding the scope of the problem is a first step to addressing burnout in an organization. High turnover rates and prevalence of sick days and other absences, and low ratings from staff on existing satisfaction or wellness surveys, are indicators of burnout. However, leaders who want to fully understand staff burnout in their organization will want to conduct dedicated assessments. You can add burnout rates to the list of other performance measures your practice monitors routinely, such as quality, patient satisfaction, and financial targets.²¹

Before administering a burnout assessment tool, it is important to commit to allocating needed resources (both human and financial) to act on the results.⁴ To encourage participation, staff should be given dedicated time at work to complete the assessment. Once data have been collected, leadership should share aggregated and de-identified results across the organization to support continuous learning and the collective development of strategies to address identified areas of concern.²³

Some things to consider when selecting a tool to assess burnout in your practice:

-  **Intended audience:** Burnout assessment tools vary in their intended audience. Some assessment tools are broad and can be used with staff across the entire practice (including both clinical and non-clinical staff), while others are designed for specific staff roles (e.g., only physicians or clinical staff) and ask more focused and more role-dependent questions.
-  **Level of burden:** Consider the burden for both participants and the organization as a whole. This burden includes the length of the assessment and types of questions, as well as any fees to use the assessment tool and the time and effort required to analyze the results (e.g., whether analysis will be done internally or by a vendor).
-  **Schedule:** Consider how often you plan to conduct the assessments. Ideally you will assess burnout at baseline before you implement any strategies to address it, and then routinely thereafter (e.g., once or twice a year) to determine whether your strategies are effective and being maintained.
-  **Benchmarks:** To interpret the results, it's ideal to choose a tool that has national benchmark data with which you can compare your results.⁴ However, comparing scores from your organization before and after implementing strategies to address burnout is also a useful strategy.

Assessment Tools

The section below describes important features of key burnout assessment tools that are relevant for healthcare settings.^{4, 24-27} Please note that the field of burnout assessment is evolving, and this is not a comprehensive list – you should do your own research before selecting a burnout assessment tool.

> Maslach Burnout Inventory (MBI)^{TM 28}

OVERVIEW

- ▶ 22-item instruments for medical and human services personnel, designed to assess emotional exhaustion, depersonalization, and personal accomplishment.
- ▶ The Maslach Burnout ToolkitTM includes the Areas of Worklife Survey (AWS) – an additional 28-item survey to help organizations identify workplace sources of burnout.
- ▶ Most widely used measure of burnout in healthcare practices.
- ▶ Benchmark data available for practices working with Mind Garden, Inc. (see “Other Notes”).
- ▶ Moderately complex to analyze.

SPECIFIC AUDIENCES

- ▶ Human services survey: (MBI-HSS)
Designed for all human services workers – refers to “recipients” of services.
- ▶ Medical personnel: (MBI-HSS MP)
Designed specifically for medical personnel – refers to “patients.”

COST

- ▶ Must pay fee for use.

OTHER NOTES

- ▶ Administration and analysis supported through Mind Garden, Inc.²⁸
- ▶ Available in multiple languages.
- ▶ General version available for occupations that do not involve provision of human services.

> Copenhagen Burnout Inventory (CBI)³¹

OVERVIEW

- ▶ 19-item questionnaire to assess personal burnout, work-related burnout, and client-related burnout.
- ▶ No U.S. benchmark data.
- ▶ Moderately complex to analyze.

SPECIFIC AUDIENCES

- ▶ Any human services employee.

COST

- ▶ Free.

OTHER NOTES

- ▶ Available in multiple languages.

Assessment Tools *continued*



Mini Z Survey ²⁹

OVERVIEW

- ▶ Mini Z. 2.0 has 11 items to assess supportive work environment, work pace, and stress related to electronic medical records (EMRs) among clinicians. (Surveys for other audiences are also available. See “Specific Audiences.”)
- ▶ Benchmark data are available for practices working with the American Medical Association (AMA) (see “Other Notes”). Survey users may also compare data with their own benchmarks.
- ▶ Comparatively simple to analyze; includes scoring guidance and reporting templates.

SPECIFIC AUDIENCES

- ▶ Clinicians: Mini Z 2.0 for physicians and advanced practice providers (11 items).
 - Optional Deep Dive Survey for Clinicians (44 items).
- ▶ Administrators and leaders: Mini Z Administrators & Leaders (17 items and two optional demographic items).
- ▶ Medical residents and fellows: Mini ReZ (16 items and four optional demographic items).
- ▶ All professionals: Mini Z General (12 items and three optional demographic items).

COST

- ▶ Free for program evaluation, research, and educational purposes.

OTHER NOTES

- ▶ Available through the Institute for Professional Worklife.²⁹
- ▶ The AMA provides free support for practices of 50 or more clinicians (physicians, NPs, PAs) to use the Mini Z 2.0 through its [Practice Transformation framework](#).



Stanford Professional Fulfillment Index™ (PFI) ³⁰

OVERVIEW

- ▶ 16-item instrument to assess physicians’ professional fulfillment and burnout as measured by work exhaustion and interpersonal disengagement over the past 2 weeks.
- ▶ The PFI is part of the Stanford Model of Professional Fulfillment™ and related surveys to improve the culture of wellness, efficiency of practice, and personal resilience.
- ▶ Benchmark data available through third-party administrator (see “Other Notes”).
- ▶ Moderately complex to analyze.

SPECIFIC AUDIENCES

- ▶ Physicians, including medical residents and fellows.

COST

- ▶ Free; non-profit organizations may self-administer the PFI without modification for research or program evaluation.

OTHER NOTES

- ▶ Third-party survey administration and support is available for a fee; contact wellmdcenter@stanford.edu.



Strategies to Address Burnout

Once you understand the magnitude of burnout among clinicians and/or other staff, the next step is to select and implement strategies to target the sources of burnout in your organization. As with other quality improvement efforts, think about how to determine priorities as an organization and how you will know whether a change is an improvement, and conduct small tests of a change before rolling it out more broadly.³²

Below we describe areas researchers have identified as important for addressing burnout, along with examples of specific strategies organizations can take.* Some of the strategies we discuss may be feasible only for large practices or health systems, but many can be scaled for smaller and independent practices. Practices can consider which strategies are most relevant to their practice setting, and tailor them as needed.

In this section we use the term “staff” to represent everyone who works in a primary care clinic, including clinicians (i.e., physicians, nurse practitioners, and physician assistants), clinical support staff (e.g., nurses and medical assistants (MAs)), and non-clinical staff (e.g., practice managers, administrative or front desk staff). When a recommendation is specific to one of these groups, that group is indicated in the text.

While always a good practice, soliciting ideas for specific changes directly from affected staff is particularly valuable when addressing burnout.²² For example, the Mayo Institute found that by engaging staff to help identify the local factors that most urgently needed to be addressed, they were able to reduce burnout, improve satisfaction, and, perhaps most importantly, “transform physicians’ mindset from that of a victim in a broken system to an engaged and empowered partner working constructively with leaders to shape their own future.”²¹

The Institute for Healthcare Improvement’s (IHI’s) Framework for Improving Joy in Work includes a conversation guide for leaders to ask staff “What matters to you?” and strategies to help identify the most pressing concerns based on the local context.³⁸ The AMA has a module on using collaborative problem-solving to identify and act on local opportunities for improvement.

* We cite sources in this section only when we mention specific studies or examples. The following references were also used to develop this content more broadly: 21-23, 33-39.



Reduce Administrative Workload

Administrative tasks take clinicians away from more rewarding and clinically important activities, and reduce the time and attention they can focus on patients. The demands of electronic health records (EHRs) – including secure messaging – can increase stress and burnout. According to recent research, half of a primary care physicians' total work time is spent on computer work outside of patient visits.⁴⁰ In addition, nearly half of family physicians' total EHR time is spent on clerical and administrative tasks such as documentation, order entry, billing and coding, and security issues (i.e., usernames and passwords),⁴⁰ indicating that a reduction in administrative tasks has great potential to free up clinicians' time.

- **Periodically review and improve workflows to minimize clinical staff frustration and protect time with patients.**

- ▶ The AMA's [Saving Time Playbook](#) and [Getting Rid of Stupid Stuff](#) can help identify unnecessary work.

- **Assess how easy the EHR is to use, and make changes to streamline tasks and workflows.**

- ▶ Use EHR audit data to understand how much time clinicians are spending on EHR tasks outside of clinic hours, and use event logs to identify EHR tasks that should be revised or delegated.
- ▶ Ask clinical staff to identify points of frustration or count the number of clicks necessary to complete a task in the EHR.
- ▶ Identify and eliminate unnecessary EHR tasks and alerts. Many EHR tasks and alerts are not clinically beneficial and are not required for compliance with regulations. The AMA developed a [de-implementation checklist](#) to help with this process.

As part of a review at one organization, physicians and nurses identified more than 300 wasteful EHR tasks. Ultimately, 10 of the most frequently ignored EHR alerts were also deemed unnecessary and were removed.²²

- **Hire additional support staff (e.g., scribes and MAs) to ease administrative and documentation burdens.**

Intermountain Healthcare piloted increasing staffing from one to two MAs per physician and provided real-time, in-room documentation and order-entry support. After six months, the care teams supported 20 percent more patient visits, while physicians spent 20 percent less time on documentation and 47 percent less time on order entry – and burnout decreased.²²

One study found that having three MAs for every two physicians resulted in a significant decrease in emotional exhaustion for participating physicians.⁴¹

- **Optimize technology to reduce administrative burdens.**

- ▶ Consider using innovative technologies to automate tasks and reduce administrative burdens when possible, such as virtual scribes or voice assistants, artificial intelligence, and natural language processing for inbox management. See the [Innovation Lab](#) of the American Academy of Family Physicians (AAFP) for information and ideas.

- **[Reduce unnecessary emails and secure messages](#) (i.e., messages sent from the EHR).**

- ▶ For example, consider turning off messages that are automatic, duplicative, or not useful (such as messages that tests were ordered that do not include results).
- ▶ Consider using virtual or physical huddle boards to support team collaboration and streamline communication.



Implement Team-Based Care and Integrated Care

Providing effective team-based care can increase efficiency, lighten clinicians' workloads, increase work satisfaction for clinical support staff, and improve patient care.

- **Consider implementing team-based care in your practice.**

- ▶ [Use team huddles](#), [pre-visit planning](#), and [pre-appointment lab tests](#) to optimize workflows.
- ▶ Allow clinical support staff to take on additional responsibilities within the scope of their licenses. For example, [use advanced rooming and discharge procedures](#) and establish physician standing orders to allow clinical support staff to deliver preventive care and health coaching.
- ▶ Have scribes and/or MAs [provide real-time documentation](#) and order entry during patient visits to reduce clinician EHR burden.
- ▶ Have non-clinical support staff obtain prior authorizations from health insurance plans and help resolve coverage-related questions.

- **[Embed or co-locate behavioral health](#) and social services in primary care, so clinical teams can focus on providing medical care knowing that the other needs of their patients are also being addressed.**

A survey found that primary care providers who thought their clinics were better at addressing patients' social needs had significantly lower rates of burnout.⁴² See the Agency for Healthcare Research and Quality (AHRQ) [resource](#) on identifying and addressing social needs in primary care settings.



Promote Work-Life Balance

People working in healthcare – particularly clinicians – often work long hours, making it challenging for them to balance their personal and professional responsibilities. Encouraging and expecting staff to take time off can help keep everyone in their roles for the long term. Allowing flexibility in work hours helps to accommodate staff with caregiving responsibilities.

- **Offer flexibility in work hours and start times, as well as job-sharing and remote work options when possible.**
 - ▶ Allow clinicians to reduce hours on a temporary basis or switch to a part-time schedule.
 - ▶ Allow clinicians to work longer and shorter hours on certain days of the week. This not only allows people to meet their personal responsibilities, but also expands access for patients.
 - ▶ Eliminate early morning and late afternoon meetings.
 - ▶ For additional flexibility, allow clinicians to schedule virtual visits, particularly at the start or end of the day.
- **Schedule protected time during the day for clinicians to complete non-billable tasks (such as working on quality improvement initiatives or conducting community outreach), to help reduce their need to work additional hours to complete these tasks.**
- **Set the expectation that all staff disconnect from work when they are off duty and on vacation.**
 - ▶ Rotate night and weekend on-call coverage. Physicians in small practices may be able to share coverage.
 - ▶ Expect all staff to use vacation time and use sick and family leave when needed. Monitor vacation time use and send reminders to people who haven't taken any time off in a six-month period. Send home sick staff who come to work.
 - ▶ Provide staff education on how to turn off or silence notifications on mobile devices during time away.
 - ▶ Monitor the inboxes of vacationing clinicians and refer urgent needs to clinicians providing coverage.



Cultivate Social Connections

Both informal and formal peer support can strengthen social connections and community in the work environment. Building strong social connections within a practice increases team communication, protects against loneliness and isolation, promotes well-being and retention, and is associated with lower burnout scores.

- [Implement peer support](#), peer coaching, and/or buddy programs.
- **Set aside time during working hours for clinical teams to discuss recent challenging situations and ethical dilemmas. This helps build camaraderie and address moral distress (the negative feelings that arise when clinicians know the morally best action to take, but are unable to act on it).**⁴³

*A randomized trial at Mayo Clinic found that providing physicians with one hour of protected time every other week to meet with a small group of colleagues and discuss work-related topics improved their sense of meaning in work and reduced burnout.*²¹

- **Provide a comfortable physical space for staff to relax and socialize, such as a staff lounge. Providing free snacks in a staff lounge can be used to show staff appreciation and motivate staff to take breaks.**
- **Provide protected time, funds, and opportunities for colleagues to socialize during work hours.**
 - ▶ Encourage and support regular social gatherings and celebrations (e.g., group lunches, group walks during lunchtime, birthday and life-event celebrations).



Promote a Culture of Wellness

In order for healthcare staff to effectively care for others, their own physical and mental health needs must first be met. Providing opportunities and resources for staff to engage in self-care strategies to prevent or mitigate burnout can complement practice-wide initiatives to promote a culture of wellness.

- **Ensure that all staff have access to (and are aware of) confidential mental health services for themselves and family members, such as through an Employee Assistance Program and comprehensive health insurance coverage.**
 - ▶ Normalize the use of mental health and substance use treatment among healthcare workers by including discussions on the topic in regular meetings or by routinely sharing coverage information with staff.

The American Psychiatric Association offers [The Working Well Toolkit](#), which includes “practical information and strategies, assessment tools, mental health programs and case studies to educate employers about current best practices to create supportive workplace environments.”⁴⁴

■ **Provide resources to promote staff resilience and self-care.**

- ▶ Provide on-site opportunities, protected time, and funding for staff to participate in activities such as mindfulness training, meditation, stress management training, and yoga.
- ▶ Provide on-site gym space or group exercise activities free of charge.
- ▶ Leaders can role-model the importance of individual wellness and resilience by attending to their own self-care and mental health.

Ninety-five percent of nurses participating in a wellness coaching program reported that the program helped them improve their mental and physical health – even during the COVID-19 pandemic.⁴⁵

■ **Commit to the safety of staff.**

- ▶ Prioritize adequate personal protective equipment, policies, and procedures.
- ▶ Establish and uphold a zero-tolerance policy for discrimination, violence, and harassment in the workplace, and institute policies to swiftly address any issues that arise.

■ **Leaders can help incorporate evidence-based approaches to suicide prevention, including identification of and response to risk in the workplace.**

The National Action Alliance for Suicide Prevention has a [Comprehensive Blueprint for Workplace Suicide Prevention](#) that includes guidance to promote mental health and suicide prevention in the workplace.

The AMA has a [toolkit for preventing physician suicide](#) that can be used to identify risk factors and warning signs for suicide and create an environment of support and wellness within your organization. The AMA also has a [toolkit](#) to help organizations respond after a physician suicide.



Cultivate Effective Leadership and Opportunities for Professional Development

Leadership plays an important role in the well-being of staff. A study found that higher leadership scores of a physician's immediate supervisor were associated with a decrease in burnout and an increase in satisfaction.²¹ Providing adequate training and advancement opportunities can also help keep staff engaged over time.

- **Develop strong leaders who understand the importance of staff well-being for the health of the organization.**

- ▶ Select leaders with the skills to foster engagement among clinicians and other staff, and invest in leadership development, training in participatory management, and team building.
- ▶ The AMA has a module on [cultivating leadership that promotes healthcare professional well-being](#).
- ▶ Ensure that leaders share responsibility for staff well-being.

- **Maintain open lines of communication among clinicians, staff, and leadership. Ensure that staff have opportunities to voice concerns, both at meetings and anonymously.**

- **Consider [creating a position for a chief wellness or well-being officer](#).**

- **[Create psychological safety](#) by developing a supportive learning environment where people can ask questions and learn from mistakes. Leaders can:**

- ▶ Practice and encourage honest communication without the fear of judgment or punishment.
- ▶ Set clear boundaries for acceptable behavior, and address boundary violations.
- ▶ Invite input from all staff members (with equal weight, regardless of role) and be open to critical feedback.
- ▶ Acknowledge the limits of their current knowledge.
- ▶ Celebrate attempts at innovation and improvement even when they are not successful.

- **Develop systems for supervisors to provide frequent, straightforward, and actionable feedback to their supervisees.**

- **Provide opportunities for staff to increase control over their work, such as allowing alternative methods of achieving the same results.**

- **Provide and promote opportunities for learning and training.**

- ▶ Allow clinicians to take time to participate in work outside of clinical care that they find personally engaging and meaningful, such as teaching, mentorship, research, and attending conferences.



Align Incentives, Payment, and Other Policies to Support Staff Well-Being

Organizations should review their current compensation practices as well as other rewards and incentives that are in place, to ensure they do not encourage overwork or other unhealthy behaviors. Carefully aligning policies to support staff well-being is a clear indication that the organization is committed to a culture of wellness.

- **Eliminate or redesign payment policies that may lead clinicians to feel overworked and unable to provide high-quality care for patients.**
 - ▶ Consider implementing a salary model or value-based payments to move away from compensation focused solely on the number of visits.
 - ▶ Consider the number of clinical sessions, patients per session, and/or relative value units that are reasonable for a full-time equivalent clinician in your practice.
 - ▶ Explicitly define expectations of clinicians and other staff and set duty hour limits. Eliminate compensation practices that incentivize staff to not use their vacation or sick time. (For example, review if current relative value unit targets discourage clinicians from taking vacation time.)
- **Develop policies and procedures (including creating a hotline or designating responsible staff) to encourage any staff member to raise ethical concerns or initiate an ethics consultation.**
- **Use rewards such as gift cards and catered lunches to acknowledge staff contributions and build morale.**

Burnout Resources

In addition to the many tools and resources included throughout the previous sections, below we include links to several key resources for understanding and addressing burnout among healthcare providers.

- The [National Academy of Medicine \(NAM\) Clinician Well-Being Collaborative](#) offers several tools and resources that healthcare leaders and workers can use to decrease burnout and improve well-being, such as a [Resource Compendium for Health Care Worker Well-Being](#). They also developed a report on [Taking Action Against Clinician Burnout](#) and a [National Plan for Health Workforce Well-Being](#).
- The [AMA STEPS Forward® program](#) offers numerous resources relevant for addressing physician and care team burnout, including toolkits on:
 - ▶ [Burnout and Well-Being](#)
 - ▶ [Cultivating Leadership: Measure and Assess Leader Behaviors to Improve Professional Well-Being](#)
 - ▶ [Team-Based Care and Workflow](#)
- The [U.S. Surgeon General's Advisory on Building a Thriving Health Workforce](#) provides steps that stakeholders can take to address healthcare worker burnout, including calls for change in the systems, structures, and cultures that shape healthcare.
- The Agency for Healthcare Research and Quality hosts an interactive training on [Joy in Work](#). The module and accompanying [resources](#) suggest strategies to address burnout.

Acknowledgements and Suggested Citation

Developed for the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services, Abt Associates (under contract #HHSP233201500013I75P00120F37008).

Acknowledgments to Christine Sinsky, MD, MACP; Alison N. Huffstetler, MD; and Jason Bradley, MSHS, for their expert external review, and to AHRQ colleagues Aimee R. Eden, PhD, MPH; Lingrui Liu, ScD; Gail Makulowich; Therese Miller, DrPH; and Patrick O'Malley, MD, MPH.

Suggested citation: Gerteis JS, Booker C, Brach C, De La Mare J. Burnout in Primary Care: Assessing and Addressing It In Your Practice. Rockville, MD: Agency for Healthcare Research and Quality; February 2023. AHRQ Publication No. 23-0025.

REFERENCES:

1. National Academies of Sciences, Engineering, and Medicine. Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being. Washington (DC): National Academies Press (US); 2019. 10.17226/25521.
2. Maslach C, Leiter MP. Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry*. 2016;15(2):103-11. 10.1002/wps.20311. PMC4911781.
3. Bodenheimer T, Sinsky C. From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider. *The Annals of Family Medicine*. 2014;12(6):573-6. 10.1370/afm.1713.
4. Dyrbye L, Meyers D, Ripp J, Dalal N, Bird S, Sen S. A Pragmatic Approach for Organizations to Measure Health Care Professional Well-Being. *NAM Perspectives*. 2018;8. 10.31478/201810b.
5. American Academy of Family Physicians. Family Physician Burnout, Well-Being, and Professional Satisfaction (Position Paper). 2017. Available from: <https://www.aafp.org/about/policies/all/family-physician-burnout.html>.
6. Edwards ST, Marino M, Balasubramanian BA, Solberg LI, Valenzuela S, Springer R, et al. Burnout Among Physicians, Advanced Practice Clinicians and Staff in Smaller Primary Care Practices. *J Gen Intern Med*. 2018;33(12):2138-46. 10.1007/s11606-018-4679-0. PMC6258608.
7. Sinsky CA, Shanafelt TD, Dyrbye LN, Sabety AH, Carlasare LE, West CP. Health Care Expenditures Attributable to Primary Care Physician Overall and Burnout-Related Turnover: A Cross-sectional Analysis. *Mayo Clinic Proceedings*. 2022;97(4):693-702. <https://doi.org/10.1016/j.mayocp.2021.09.013>.
8. Shanafelt TD, West CP, Sinsky C, Trockel M, Tutty M, Wang H, et al. Changes in Burnout and Satisfaction With Work-Life Integration in Physicians and the General US Working Population Between 2011 and 2020. *Mayo Clin Proc*. 2022;97(3):491-506. 10.1016/j.mayocp.2021.11.021.
9. Gunja MZ, Gumas ED, Il RDW, Doty MM, Shah A, Fields K. Stressed Out and Burned Out: The Global Primary Care Crisis. The Commonwealth Fund; 2022. Available from: https://www.commonwealthfund.org/publications/issue-briefs/2022/nov/stressed-out-burned-out-2022-international-survey-primary-care-physicians?utm_source=alert&utm_medium=email&utm_campaign=Improving+Health+Care+Quality.
10. Eden AR, Jabbarpour Y, Morgan ZJ, Wilkinson E, Peterson LE. Burnout Among Family Physicians by Gender and Age. *J Am Board Fam Med*. 2020;33(3):355-6. 10.3122/jabfm.2020.03.190319.
11. Goldberg DG, Soylu TG, Grady VM, Kitsantas P, Grady JD, Nichols LM. Indicators of Workplace Burnout Among Physicians, Advanced Practice Clinicians, and Staff in Small to Medium-Sized Primary Care Practices. *The Journal of the American Board of Family Medicine*. 2020;33(3):378-85. 10.3122/jabfm.2020.03.190260.
12. Seay-Morrison TP, Hirabayashi K, Malloy CL, Brown-Johnson C. Factors Affecting Burnout Among Medical Assistants. *J Healthc Manag*. 2021;66(2):111-21. 10.1097/jhm-d-19-00265.
13. Sinsky CA, Brown RL, Stillman MJ, Linzer M. COVID-Related Stress and Work Intentions in a Sample of US Health Care Workers. *Mayo Clinic Proceedings*. 2021. COVID-Related Stress and Work Intentions in a Sample of US Health Care Workers.
14. Abbasi J. Pushed to Their Limits, 1 in 5 Physicians Intends to Leave Practice. *JAMA*. 2022;327(15):1435-7. 10.1001/jama.2022.5074.
15. Shanafelt TD, West CP, Dyrbye LN, Trockel M, Tutty M, Wang H, et al. Changes in Burnout and Satisfaction With Work-Life Integration in Physicians During the First 2 Years of the COVID-19 Pandemic. *Mayo Clinic Proceedings*. 2022. <https://doi.org/10.1016/j.mayocp.2022.09.002>.
16. Horstman C, Lewis C. Commonwealth Fund Blog [Internet]: The Commonwealth Fund. 2022. [cited October 14, 2022]. Available from: <https://www.commonwealthfund.org/blog/2022/how-primary-care-faring-two-years-covid-19-pandemic>.
17. World Health Organization. Burn-out an "occupational phenomenon": International Classification of Diseases <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>. [Accessed October 14, 2022]
18. Mehta LS, Murphy DJ, Jr. Strategies to prevent burnout in the cardiovascular health-care workforce. *Nat Rev Cardiol*. 2021;18(7):455-6. 10.1038/s41569-021-00553-0. PMC8050818.
19. Melnyk BM, Kelly SA, Stephens J, Dhakal K, McGovern C, Tucker S, et al. Interventions to Improve Mental Health, Well-Being, Physical Health, and Lifestyle Behaviors in Physicians and Nurses: A Systematic Review. *Am J Health Promot*. 2020;34(8):929-41. 10.1177/0890117120920451. PMC8982669.
20. Han S, Shanafelt TD, Sinsky CA, Awad KM, Dyrbye LN, Fiscus LC, et al. Estimating the Attributable Cost of Physician Burnout in the United States. *Ann Intern Med*. 2019;170(11):784-90. 10.7326/m18-1422.
21. Shanafelt TD, Noseworthy JH. Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout. *Mayo Clin Proc*. 2017;92(1):129-46. 10.1016/j.mayocp.2016.10.004.
22. Sinsky CA, Biddison LD, Mallick A, Dopp AL, Perlo J, Lynn L, et al. Organizational Evidence-Based and Promising Practices for Improving Clinician Well-Being. *NAM Perspect*. 2020. 10.31478/202011a. PMC8916810.
23. National Academy of Medicine. National Plan for Health Workforce Well-Being. Washington, DC: The National Academies Press; 2022. <http://doi.org/10.17226/26744>.

24. National Academy of Medicine. Valid and Reliable Survey Instruments to Measure Burnout, Well-Being, and Other Work-Related Dimensions <https://nam.edu/valid-reliable-survey-instruments-measure-burnout-well-work-related-dimensions/>. [Accessed October 14, 2022]
25. Trockel M, Bohman B, Lesure E, Hamidi MS, Welle D, Roberts L, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry*. 2018;42(1):11-24. 10.1007/s40596-017-0849-3. PMC5794850.
26. John Snow, Inc. HRSA Health Center Workforce Survey: Literature Review Summary. 2020. Available from: <https://www.jsi.com/resource/hrsa-health-center-workforce-survey-literature-review-summary/>.
27. Witte HD, Schaufeli WB, Desart S. Burnout Assessment Tool. 2020. Available from: https://burnoutassessmenttool.be/project_eng/.
28. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout Inventory™ (MBI). Mind Garden. Available from: <https://www.mindgarden.com/117-maslach-burnout-inventory-mbi>.
29. Institute for Professional Worklife. Mini Z Survey <https://www.professionalworklife.com/mini-z-survey>. [Accessed October 15, 2022]
30. Stanford Medicine WellMD & WellPhD Center. How We Measure Well-Being <https://wellmd.stanford.edu/wellbeing-toolkit/howwemeasurewell-being.html>. [Accessed October 14, 2022]
31. The National Research Center for the Working Environment (NFA). Copenhagen Burnout Inventory - CBI Available from: <https://nfa.dk/da/Vaerktoejer/Sporgeskemaer/Sporgeskema-til-maalng-af-udbraendthed/Copenhagen-Burnout-Inventory-CBI>.
32. Institute for Healthcare Improvement. How to Improve <https://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>. [Accessed October 16, 2022]
33. Chung S, Dillon EC, Meehan AE, Nordgren R, Frosch DL. The Relationship Between Primary Care Physician Burnout and Patient-Reported Care Experiences: a Cross-sectional Study. *J Gen Intern Med*. 2020;35(8):2357-64. 10.1007/s11606-020-05770-w. PMC7403375.
34. Kung A, Cheung T, Knox M, Willard-Grace R, Halpern J, Olayiwola JN, et al. Capacity to Address Social Needs Affects Primary Care Clinician Burnout. *Ann Fam Med*. 2019;17(6):487-94. 10.1370/afm.2470. PMC6846269.
35. Office of the Surgeon General, U.S. Department of Health & Human Services. Addressing Health Worker Burnout: The U.S. Surgeon General's Advisory on Building a Thriving Health Workforce. Office of the Surgeon General, U.S. Department of Health & Human Services; 2022. Available from: <https://www.hhs.gov/surgeongeneral/priorities/health-worker-burnout/index.html>.
36. Smith CD, Balatbat C, Corbridge S, Dopp AL, Fried J, Harter R, et al. Implementing Optimal Team-Based Care to Reduce Clinician Burnout. *NAM Perspectives*. 2018. <https://doi.org/10.31478/201809c>.
37. Brach C. Creating Psychological Safety in Teams: Handout <https://www.ahrq.gov/evidencenow/tools/psychological-safety.html>. [Accessed October 16, 2022]
38. Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D. IHI Framework for Improving Joy in Work. IHI White Paper. 2017. <https://www.ihl.org/resources/Pages/IHIWhitePapers/Framework-Improving-Joy-in-Work.aspx>
39. Substance Abuse and Mental Health Services Administration (SAMHSA). Addressing Burnout in the Behavioral Health Workforce Through Organizational Strategies. Rockville, MD: National Mental Health and Substance Use Policy Laboratory, Substance Abuse and Mental Health Services Administration (SAMHSA); 2022. Available from: https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/pep22-06-02-005.pdf.
40. Arndt BG, Beasley JW, Watkinson MD, Temte JL, Tuan WJ, Sinsky CA, et al. Tethered to the EHR: Primary Care Physician Workload Assessment Using EHR Event Log Data and Time-Motion Observations. *Ann Fam Med*. 2017;15(5):419-26. 10.1370/afm.2121. PMC5593724.
41. Gregory ST, Menser T, Gregory BT. An Organizational Intervention to Reduce Physician Burnout. *J Healthc Manag*. 2018;63(5):338-52. 10.1097/jhm-d-16-00037.
42. Olayiwola JN, Willard-Grace R, Dubé K, Hessler D, Shunk R, Grumbach K, et al. Higher Perceived Clinic Capacity to Address Patients' Social Needs Associated with Lower Burnout in Primary Care Providers. *J Health Care Poor Underserved*. 2018;29(1):415-29. 10.1353/hpu.2018.0028.
43. Ulrich CM, Grady C. Moral Distress and Moral Strength among Clinicians in Health Care Systems: A Call for Research. *NAM Perspect*. 2019;2019. 10.31478/201919c. PMC8486419.
44. Brennan W, Vecchio KD-D, Emmet W, Goldfarb S, Lattarulo C, Mantych C, et al. The Working Well Toolkit <https://workplacementalhealth.org/employer-resources/the-working-well-toolkit>. [Accessed October 16, 2022]
45. Teall AM, Mazurek Melnyk B. An Innovative Wellness Partner Program to Support the Health and Well-being of Nurses During the COVID-19 Pandemic: Implementation and Outcomes. *Nurs Adm Q*. 2021;45(2):169-74. 10.1097/naq.0000000000000457.