



Creating an Optimal
Environment for Quality
Healthcare for Individuals,
Families, and Communities



University of Colorado
Anschutz Medical Campus

@dyrbye



Enhancing Workforce Resilience & Well-Being

Lotte Dyrbye, MD MHPE

Professor of Medicine

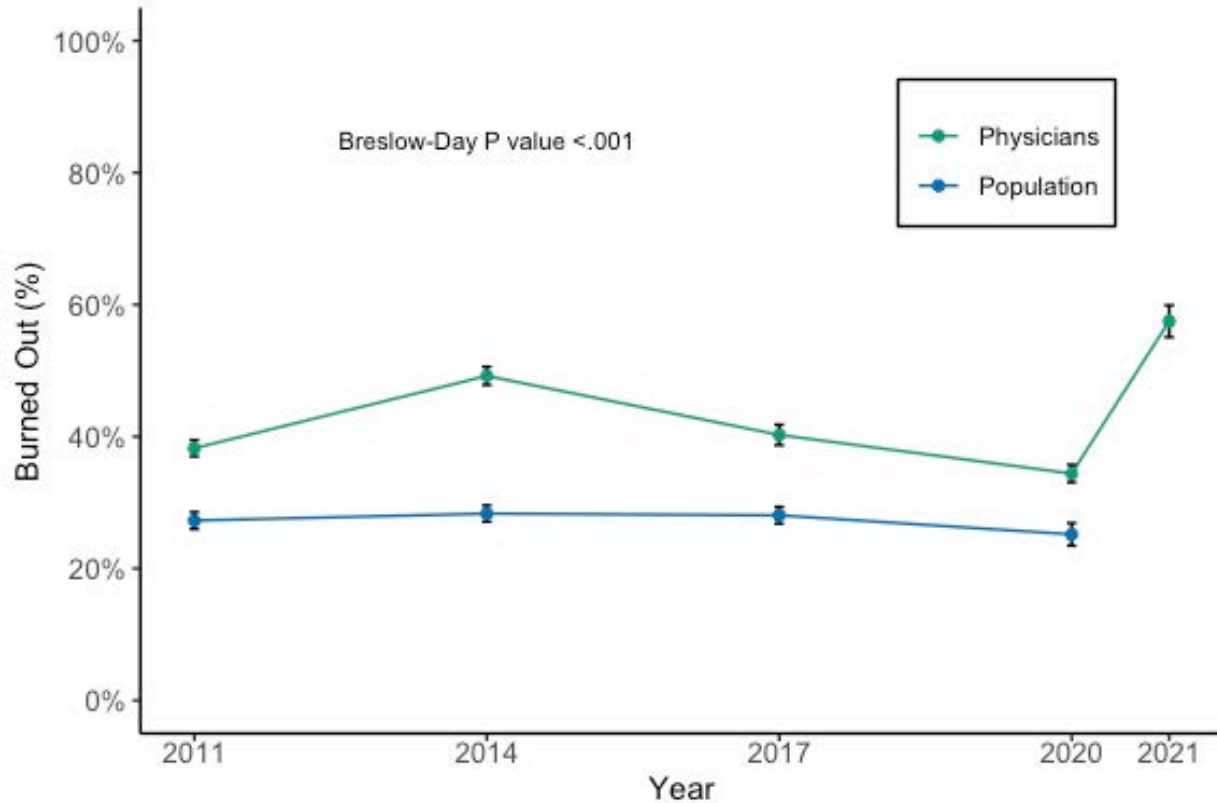
Chief Well-Being Officer and Senior Associate Dean

Univ. of Colorado School of Medicine



MISSION CRITICAL





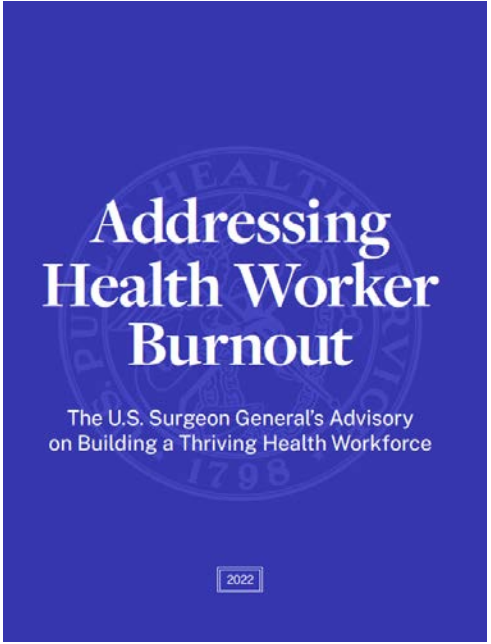
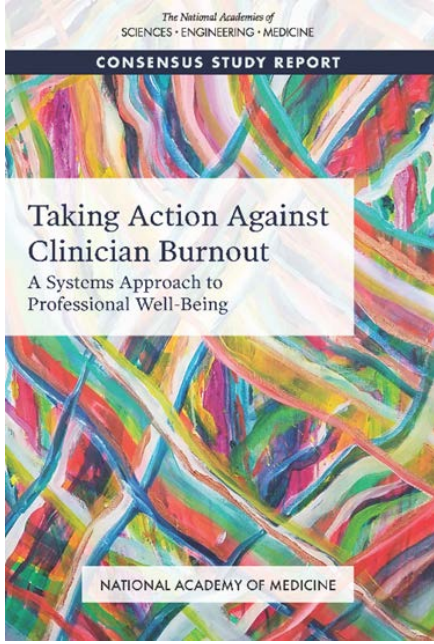
TRENDS IN PHYSICIAN BURNOUT

Dramatic increase in burnout
 ~ 21 months into pandemic

SO WHAT?



CLINICIAN WELL-BEING



Nationally, high prevalence of burnout among health care workers



Broad consequences

Quality, safety, cost



↓ COST
CONSCIOUSNESS



UNPROFESSIONAL
BEHAVIORS



↓ ACCOUNTABILITY



MEDICAL ERROR



PATIENT MORTALITY



HOSPITAL INFECTIONS



MALPRACTICE
LITIGATION



MENTAL HEALTH

PROFESSIONALISM

2017, 2256 nurses and >5000 physicians
Burnout independently associated with suboptimal professionalism
on MV analysis after adjusting for other profession & personal
characteristics

PHYSICIANS



↓ **COST
CONSCIOUSNESS**



**UNPROFESSIONAL
BEHAVIORS**

NURSES



↓ **ACCOUNTABILITY**

RACIAL BIAS

2017, 3392 PGY 2 residents

Worsening of burnout was associated with explicit bias toward black people

Burnout may contribute to disparities in care
Implications for quality of care

Dyrbye et al. JAMA Network Open
2019;2(7)

R01HL085631 NIH



Competency

- ✓ Lower in-training exam scores
- ✓ Lower cumulative performance scores on simulation scenarios
- ✓ Greater struggles with concentrating at work
- ✓ Decreased motivation at work

- West JAMA 2011; 306; Fahrenkopf BMJ 336; Ratanawongsa Med Educ 41; Lu Educ Train 1; McConnell Acad Med 87

BURNOUT

Negative emotions can impede impact learning, recall, and application of knowledge and skills



Quality & safety

Multiple systematic reviews and meta-analyses have concluded burnout impacts quality of care in a variety of ways.

“Missing quality indicator”

Wallace et al. Lancet 374(9702): 1714-1721

2

MEDICAL ERROR

Burnout & depressive symptoms
>8000 US Surgeons



PATIENT MORTALITY

Physician and Nurse burnout scores
independent predictor mortality ICU

2

MALPRACTICE LITIGATION

Burnout & depressive symptoms
7316 US Surgeons



HOSPITAL INFECTIONS

Mean burnout hospital nurses' independent
predictor



BURNOUT



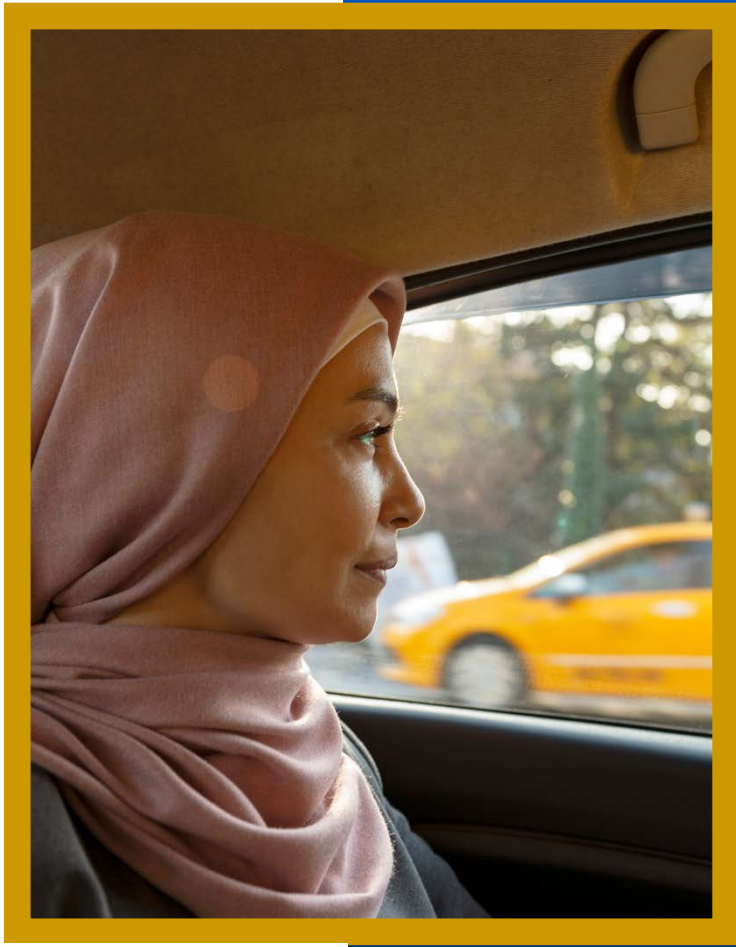
REDUCTION IN FTE =

1 point ↑ emotional
exhaustion

(domain of burnout)

43% ↑ odds of
reducing FTE over 24
months

3 classes per year of
loss productivity at
national level



TURNOVER

Physicians with burnout are 2x as likely to leave their job

JAMA Intern Med 2018;178(6);
BMC Health Serv Res 2018;18(1)

[◀ PREV ARTICLE](#) | [THIS ISSUE](#) | [NEXT ARTICLE ▶](#)

MEDICINE AND PUBLIC ISSUES | 4 JUNE 2019

Estimating the Attributable Cost of Physician Burnout in the United States FREE

Shasha Han, MS; Tait D. Shanafelt, MD; Christine A. Sinsky, MD; Karim M. Awad, MD; Liselotte N. Dyrbye, MD, MHPE; Lynne C. Fiscus, MD, MPH; Mickey Trockel, MD; Joel Goh, PhD

\$4.6 BILLION

cost related to physician turnover and reduced clinical hours attributable to burnout each year in the US



\$7600

per physician at the organization level

Health Care Expenditures Attributable to Primary Care Physician Overall and Burnout-Related Turnover: A Cross-sectional Analysis



Christine A. Sinsky, MD; Tait D. Shanafelt, MD; Liselotte N. Dyrbye, MD, MHPE; Adrienne H. Sabety, PhD; Lindsey E. Carlasare, MBA; and Colin P. West, MD, PhD

\$260 MILLION

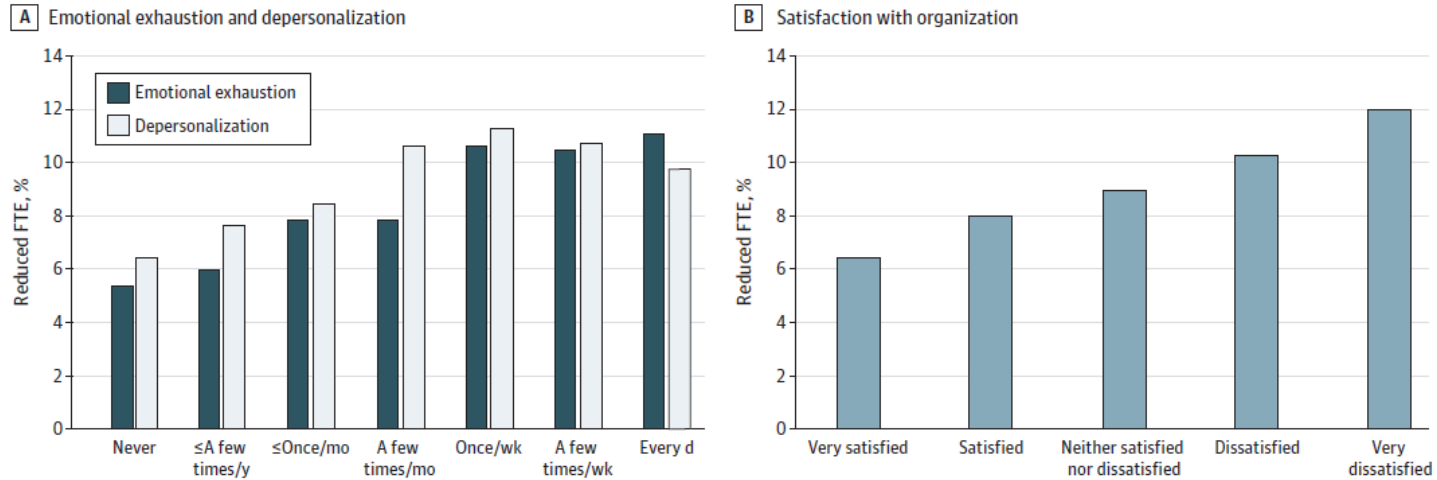
Excess health care expenditures for public and private payers attributable to PCP burnout-related turnover



Turnover of PCPs results in ~ \$979 million in excess health care expenditures/year.

Nonphysician Health Care Workers' Burnout and Subsequent Changes in Work Effort

Figure. Emotional Exhaustion, Depersonalization, and Satisfaction With the Organization at Baseline and Reduction in Work Effort at 24 Months



Work effort was measured by reduction in full time equivalent (FTE).

Burnout and professional satisfaction of >26000 HCWs were associated with subsequent changes in work effort over the following 24 months

Moral imperative



Dyrbye et al. Annals of Internal Medicine. 149:334-341, 2008. ; Shanafelt, Balch, Dyrbye et al. Archive of Surgery, 146(1):64-67, 2011; Shanafelt, Dyrbye et al. Mayo Clin Proc. 2021 Jul 7; Oreskovich et al. 2012;147(2):168-174; Jackson...Dyrbye. Academic Medicine 2016 Sep; 91 (9):1251-6 ; Kelsey...Dyrbye. American Journal of Nursing. In press.

NOW WHAT?



A network diagram consisting of numerous black nodes of varying sizes connected by thin grey lines. The nodes are scattered across the white background, with some forming small clusters and others standing alone. The lines represent connections between the nodes, creating a complex web of relationships. The overall appearance is that of a data network or a molecular structure.

**DRIVERS ARE
COMPLEX &
MULTIFACTORIAL**



Enhancing Workforce Resilience & Well-Being
A Path Forward

Lee Daugherty Biddison, MD, MPH,
Associate Professor
Chief Wellness Officer, Johns Hopkins Medicine



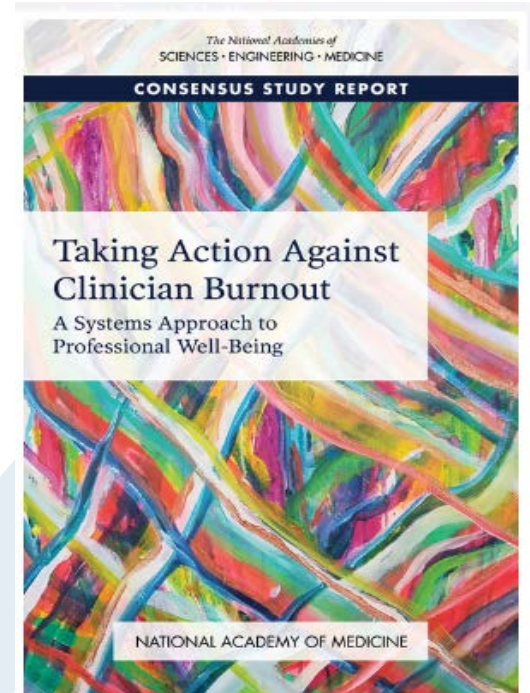
Systems Approaches



Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout

Tait D. Shanafelt, MD, and John H. Noseworthy, MD, CEO

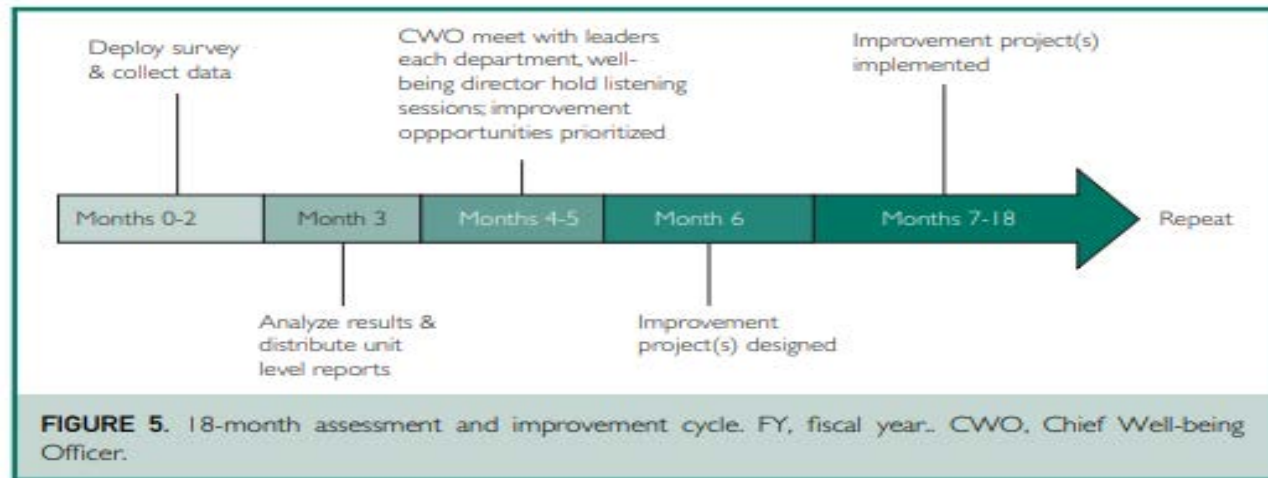
SPECIAL ARTICLE



Organization-Wide Approaches to Foster Effective Unit-Level Efforts to Improve Clinician Well-Being

[Check for updates](#)

Tait D. Shanafelt, MD; David Larson, MD, MBA; Bryan Bohman, MD; Rachel Roberts, MD; Mickey Trockel, MD, PhD; Eva Weinlander, MD; Jill Springer; Hanhan Wang; Sherilyn Stolz; and Daniel Murphy, MD



Resources for Health Care Worker Well-Being: 6 Essential Elements



nam.edu/CW | [#ClinicianWellBeing](https://twitter.com/ClinicianWellBeing)

Sinsky, C. A., L. Daugherty Biddison, A. Mallick, A. Legreid Dopp, J. Perlo, L. Lynn, and C. D. Smith. 2020. Organizational Evidence-Based and Promising Practices for Improving Clinician Well-Being. *NAM Perspectives*. Discussion Paper, National Academy of Medicine, Washington, DC.

Strengthen Leadership Behaviors

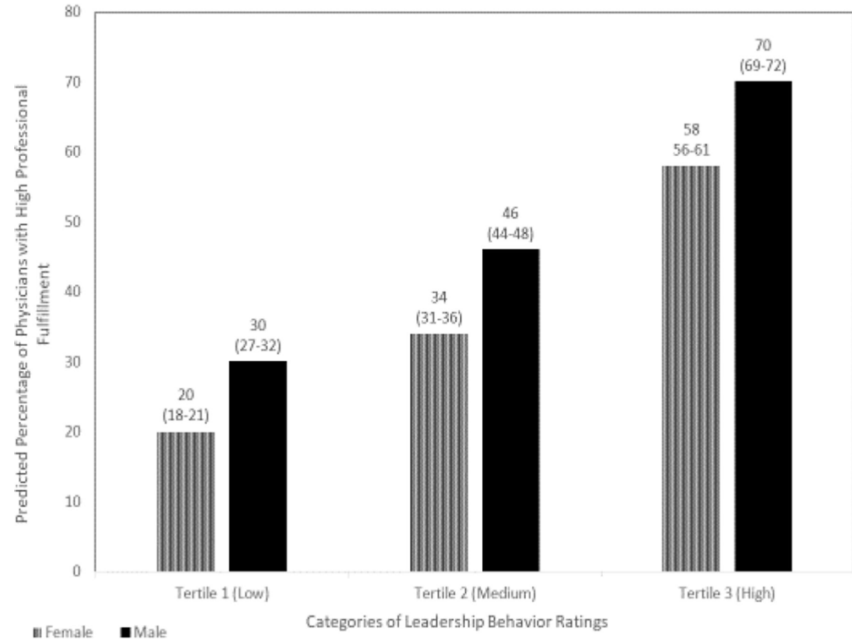
Open access

Original research

BMJ Open Impact of leadership behaviour on physician well-being, burnout, professional fulfilment and intent to leave: a multicentre cross-sectional survey study

Mihriye Mete,^{1,2,3} Charlotte Goldman,⁴ Tait Shanafelt,⁵ Daniel Marchalik^{3,6}

Likelihood (%; 95% CI) of professional fulfilment status by the tertiles of supervisor leadership.



Wellness-Centered Leadership: Equipping Health Care Leaders to Cultivate Physician Well-Being and Professional Fulfillment

Tait Shanafelt, MD, Mickey Trockel, MD, PhD, Ashleigh Rodriguez, MSN, MMM, APRN, and Dave Logan, PhD



AMA | STEPSforward[®]

Wellness-Centered Leadership Playbook

Conduct Workplace Assessment

- Burnout and Fulfillment
- Drivers of Burnout
- EHR Metrics
- Organizational Metrics



Organizational Well-Being Assessment

Calculate the Cost of Physician Burnout for Your Organization^{1,2}

500 physicians

Number of physicians in your organization

63% burnout

Rate of physician burnout in your organization ?

7% turnover

Current physician turnover rate (all causes) in your organization ?

\$800,000 / physician

Cost of turnover in your organization, per physician ?

Epic



 **WELL-BEING**
index

Healthcare **PWAC** | Professional Well-being
Academic Consortium

Examine Policies and Practices

- Licensure, Credentialing, and Removing Mental Health Stigma
- Regulatory guidance



Enhance Workplace Efficiency

- Deep Work and Cognitive Load
- Eliminating unnecessary work
- Sharing necessary work



Saving Time Playbook

Perspective
NOVEMBER 8, 2018

Getting Rid of Stupid Stuff

Melinda Ashton, M.D.

N ENGL J MED 379:19 NEJM.ORG NOVEMBER 8, 2018

Journal of the American Medical Informatics Association, 29(6), 2022, 1050–1059

<https://doi.org/10.1093/jamia/ocac027>

Advance Access Publication Date: 4 March 2022

Research and Applications



Research and Applications

Clinician collaboration to improve clinical decision support: the Clickbusters initiative



Cultivate Culture of Connection and Support

“Where You Feel Like a Family Instead of Co-workers”: a Mixed Methods Study on Care Teams and Burnout

Monica A. Lu, MD¹, Jacqueline O’Toole, DO, MHS², Matthew Shneyderman²,
Suzanne Brockman, MA, RN³, Carolyn Cumpsty-Fowler, PhD, MPH^{3,4},
Deborah Dang, PhD, RN⁵, Carrie Herzke, MD, MBA^{1,2}, Cynthia S. Rand, PhD²,
Heather F. Sateia, MD², Erin Van Dyke, PhD, MS⁶, Michelle N. Eakin, PhD, MA², and
E. Lee Daugherty Biddison, MD, MPH² <https://pubmed.ncbi.nlm.nih.gov/36038756/>

**Table 2 Associations Between Perceptions of Care Teams and
Burnout**

	<i>Odds ratio</i>	<i>P value</i>	<i>95% CI</i>
Care team items			
My care team works efficiently together.	0.83	0.007	0.72, 0.95
I feel isolated at work.	1.68	<0.001	1.48, 1.91
The clinical environment in which I work allows me to deliver outstanding clinical care.	0.76	0.004	0.64, 0.91
Covariates			
Profession (physician)	1.08	0.590	0.81, 1.45
Gender (female)	1.37	0.048	1.00, 1.86
Age range			
18–34 years old (reference)			
35–54 years old	0.60	0.001	0.44, 0.81
55–65 years old	0.36	<0.001	0.25, 0.53
65+ years old	0.18	<0.001	0.08, 0.40

Model is adjusted for profession (physician/nurse), gender (male/female), and age range (18–34, 35–54, 55–65, and 65+ years old)

Colleagues Meeting to Promote and Sustain Satisfaction (COMPASS) Groups for Physician Well-Being: A Randomized Clinical Trial

Colin P. West, MD, PhD; Liselotte N. Dyrbye, MD, MHPE; Daniel V. Satele, BS; and Tait D. Shanafelt, MD

Mayo Clin Proc. n October 2021;96(10):2606-2614 n <https://doi.org/10.1016/j.mayocp.2021.02.028>
www.mayoclinicproceedings.org

Perspective

Peer Support for Clinicians: A Programmatic Approach

Jo Shapiro, MD, and Pamela Galowitz

Academic Medicine, Vol. 91, No. 9 / September 2016





Creating an Optimal
Environment for Quality
Healthcare for Individuals,
Families, and Communities

Reorienting around Relationships to Achieve Quadruple Aim

Christine A. Sinsky, MD MACP
VP, Professional Satisfaction
American Medical Society



While burnout *manifests* in individuals,



it *originates* in systems.



Relational



Infrastructures: regulation, staffing, technology

Connections

- Secret sauce
- Hidden architecture
- Bring value into open
- Intentionally strengthen this key backbone of healthcare
- **Source of individual and system resilience**



High cost of broken relationships

Health Care Expenditures Attributable to Primary Care Physician Overall and Burnout-Related Turnover: A Cross-sectional Analysis

Christine A. Sinsky, MD; Tait D. Shanafelt, MD; Liselotte N. Dyrbye, MD, MHPE; Adrienne H. Sabety, PhD; Lindsey E. Carlasare, MBA; and Colin P. West, MD, PhD

Abstract

Objective: To estimate the excess health care expenditures due to US primary care physician (PCP) turnover, both overall and specific to burnout.

Methods: We estimated the excess health care expenditures attributable to PCP turnover using published data for Medicare patients, calculated estimates for non-Medicare patients, and the American Medical Association Masterfile. We used published data from a cross-sectional survey of US physicians conducted between October 12, 2017, and March 15, 2018, of burnout and intention to leave one's current practice within 2 years by primary care specialty to estimate excess expenditures attributable to PCP turnover due to burnout. A conservative estimate from the literature was used for actual turnover based on intention to leave. Additional publicly available data were used to estimate the average PCP panel size and the composition of Medicare and non-Medicare patients within a PCP's panel.

Results: Turnover of PCPs results in approximately \$979 million in excess health care expenditures for public and private payers annually, with \$260 million attributable to PCP burnout-related turnover.

- PCP turnover costs:
 - \$1 B per year in excess healthcare expenditures
 - \$260 M due to PCP turnover due to burnout
- Note: excess costs due to lack of continuity and is independent of recruitment, replacement and lost productivity costs.

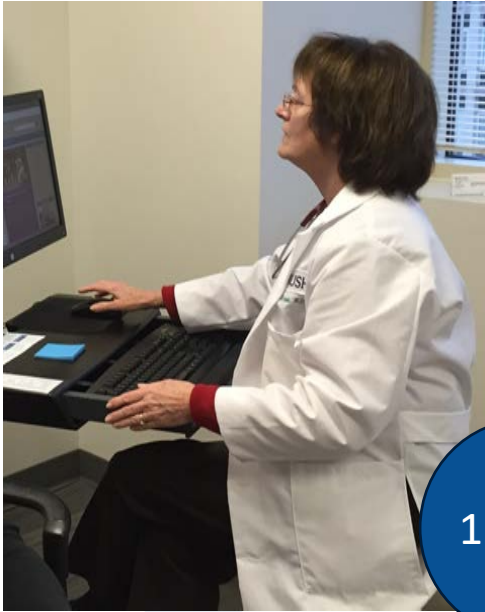
Discontinuity Doubles Work

Personal Physician



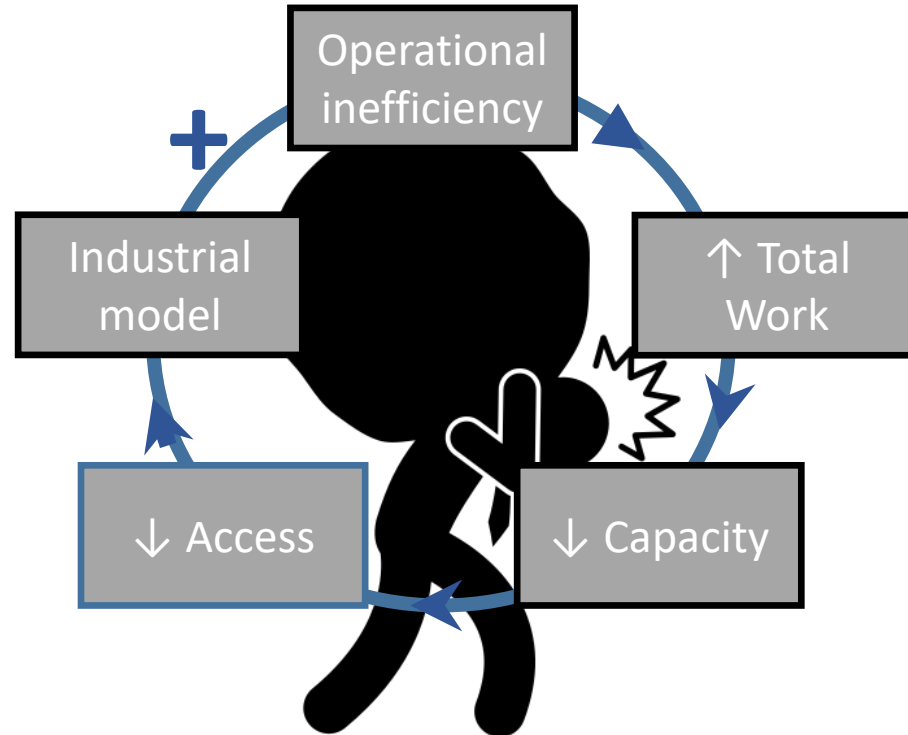
40 min

Unfamiliar physician

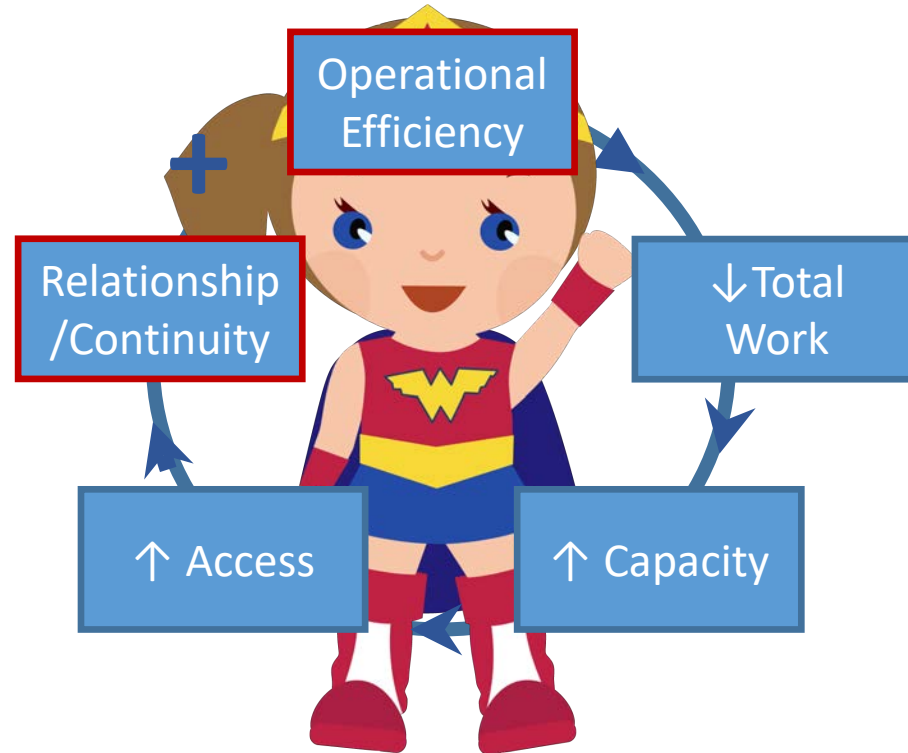


15 min

Vicious Cycle: Downward spiral



Virtuous Cycle



Relationships are our Superpower

• Continuity with patients

- ↑ Quality
- ↓ Cost
- ↑ Medication adherence
- ↓ ER/Hospitalization
- ↓ Mortality



• Continuity within teams

- ↓ Cost
- ↑ Q
- ↑ Access
- ↓ Burnout

Continuity within teams

Reinventing the Medical Assistant Staffing Model at No Cost in a Large Medical Group

THE INNOVATION

Mounting nonclinical burdens, declining staff ratios, and rotating staff in large medical groups increase burnout and hamper the joy of primary care practice.¹ Some systems invest heavily in additional staff and training to offload this nonclinical work from physicians.²⁻⁵ We reorganized our existing medical assistant (MA) staffing model from rotating assignments to a matched pairing of 1 MA to each physician. We created a structured approach to personalize methods of improving efficiency, productivity, quality, and job satisfaction for each pair.

- 1:1 stable pairings
MA: MD
 - ↑ RVUs (11%)
 - ↑ A1c control, PapS, depression screening
 - ↑ MD satisfaction
 - ↑ MA retention

Stable Pairing → ↑ Capacity ↑ Retention



“We are one of the few PC clinics in our system with full staffing.”

Nadim Ilbawi, MD 10.10.23



Reinventing the Medical Assistant Staffing Model at No Cost in a Large Medical Group

Nadim M. Ilbawi, Monica Kamleniarz, Avisek Datta and Bernard Ewigman
The Annals of Family Medicine March 2020, 18 (2) 180. DOI: <https://doi.org/10.1370/afm.2468>

Article Figures & Data eLetters Info & Metrics PDF

THE INNOVATION

Mounting nonclinical burdens, declining staff ratios, and rotating staff in large medical groups increase burnout and hamper the joy of primary care practice.¹ Some systems invest heavily in additional staff and training to offload this nonclinical work from physicians.²⁻⁵ We reorganized our existing medical assistant (MA) staffing model from rotating assignments to a matched pairing of 1 MA to each physician. We created a structured approach to personalize methods of improving efficiency, productivity, quality, and job satisfaction for each pair.



Print Download PDF Share % Post

<https://www.annfammed.org/content/annalsfm/18/2/180.full.pdf>

Stability of Surgeon-Anesthesiologist Dyad

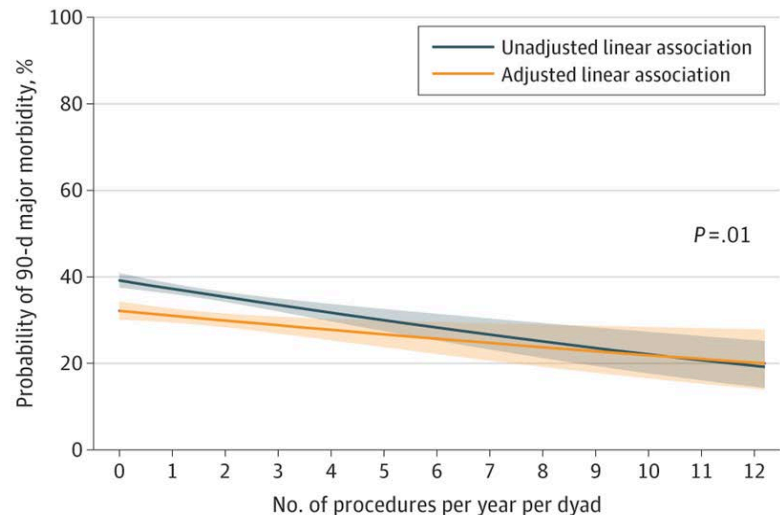


8,000 pts

https://jamanetwork.com/journals/jamasurgery/fullarticle/2801765?guestAccessKey=5d822524-66d9-4009-ae77-05eb07ea91df&utm_source=silverchair&utm_campaign=jamasurgery&utm_content=most-viewed-2023&cmp=1&utm_medium=email

Each additional procedure by same dyad associated with **5% ↓** in odds of 90-day **major morbidity**.

Figure 2. Linear Association of the Probability of 90-Day Major Morbidity by Annualized Dyad Volume, Unadjusted and Adjusted^d



ER: “Team is Brain”



Door to needle (tPA) time ↓ for acute stroke

When ER team members have previously worked together on acute stroke ($P < 0.001$).

24 EDs: Stanford, UCSF, KPNC
EHR event log data:

- Team busyness (#stations, #non-index patients, task switching)
- DNT (ADT and MAR times)

JAMIA 2023; 30(1): 8-15



Receptionist



Pharmacist



Transcriptionist

The Great Work Transfer

Iron Doc



Receptionist

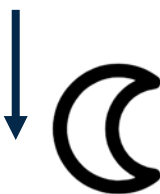


Key burnout drivers

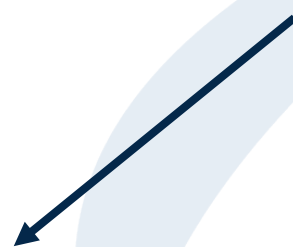
- CPOE
- Inbox



Pharmacist



Transcriptionist



Time pressure 2:1 +
WOW

Cognitive overload

Practicing Wisely: Clinical excellence depends on operational efficiency

Save 3-5 hours/day

- Practice Re-engineering

- Pre-visit lab
- Prescription mgt
- Expanded rooming/discharge
- Optimize physical space
- Inbox management
- **Team documentation**

½ hr

½ hr

1 hr

1 hr

½ hr

1-2 hr

3+ hr/d



Undivided attention



aTBC one year vs traditional model

- 8% ↑ in 7 key PMs
- \$27 ↓ PMPM in NextGen ACO*
- \$724 ↑ payments to Bellin per pt

*NextGen ACO patients in TBC vs non-aTBC clinics

Organizational Tools



De-implementation checklist

In an effort to **reduce unintended burdens** for clinicians, health system leaders can consider *de-implementing* processes or requirements that add little or no value to patients and their care teams. Physicians themselves are often in the best position to recognize these unnecessary burdens in their day-to-day practice. The following list includes potential de-implementation actions to consider. Learn more on how to reduce the unnecessary daily burdens for physicians and clinicians at stepsforward.org.

EHR

- Minimize alerts**
 - Retain only those alerts with evidence of a favorable cost-benefit ratio
- Simplify login**
 - Simplify and streamline login process, leveraging options like single sign-on, RFID proximity identification, bioidentification (fingerprint, facial recognition, etc.)
- Extend time before auto-logout**
 - Consider extending time for workstation auto-logout
 - Consider customizing workstation location and the security level to use patterns of the specific user
- Decrease password-related burdens**
 - Consider extending the intervals for password reset requirements
 - Help users create passwords that are both strong and easy to remember (i.e., by allowing special characters and spaces, and by allowing longer passwords that can be passphrases)
 - Consider use of password keeper programs
- Reduce clicks and hard-stops in ordering**
 - Reduce requirements for input of excessive clinical data prior to ordering a test
 - Eliminate requirements to fill fields attesting to possible pregnancy in males or women over 60 years old
- Eliminate requirements for password revalidation**
 - Identify ways to reduce unnecessary requirements for users to **re-enter username/password** when already signed in to EHR, to send prescriptions (Note: Organizations may choose to keep this requirement in place for opioid prescriptions.)
- Reduce note-bloat**
 - Reduce links imbedded in visit note documentation templates that automatically pull in data from other parts of EHR contributing to "note bloat," but adding little if any true clinical value

<https://www.ama-assn.org/system/files/2021-02/de-implementation-checklist.pdf>

JOY IN MEDICINE

Health System Recognition Program

111 Organizations

BRONZE

36

Commitment

Formalized well-being committee

Assessment

Burnout assessment within last three years

Efficiency of practice environment

Measure "work outside of work" via EHR audit data

Leadership

Assess leadership skills for all leaders within last three years

OR

Appoint staff to de-implement unnecessary admin burdens

Teamwork

Measure teamwork within the last three years

Support

Peer support program to deal with adverse events

SILVER

26

Commitment

Executive leadership (0.5 FTE) position devoted to wellness

Assessment

Burnout assessment for two consecutive intervals
Burnout results shared with executive leadership and future targets established

Efficiency of practice environment

EHR audit data shared with executive leadership

Leadership

Assess leadership skills for all leaders annually

Implement leader development program

Query physicians about unnecessary admin burdens

Teamwork

Measure teamwork via EHR audit data

Support

Peer support program to deal with broader issues beyond adverse events

GOLD

10

Commitment

Establish formal strategic aim to improve well-being

Assessment

Estimate costs of burnout to organization and share with executive leadership

Efficiency of practice environment

Intervention based on EHR audit results

Leadership

Tailor leadership development program based on leadership assessment(s)

Actively dismantle admin burdens identified from query

Teamwork

Develop intervention based on teamwork assessment and EHR audit data

Support

Structured program to actively cultivate community at work

Practice Science

Tests



Treatment

>\$240 Billion/year

Star Wars tech on a Flintstones chassis



<\$0.5 Billion/yr

Industry:	\$161 B
Fed gov:	61 B
Academia:	16 B
Foundations:	3 B
State	2 B

https://www.researchamerica.org/wp-content/uploads/2022/09/ResearchAmerica-Investment-Report.Final_January-2022-1.pdf

Delivery model to wisely deploy





Relationships

Efficiency

Relationships

+

Efficiency

Access



Relationships
+
Efficiency

Satisfaction



Relationships

+

Efficiency

Quality



Relationships

+

Efficiency

Safety



Relationships
+
Efficiency



↓ Cost

How care looks different
in your sphere?

Unleash the
Power of
Connection

