The Federation of State Medical Boards Annual Meeting

April 26, 2014

Denver, Colorado

"Generational Topics in Physician Health: From Burnout to Marijuana"

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Consultant and PPC-Tri-Chair, FSPHP

Doctor Oreskovich has nothing to disclose.

Acknowledgement to our 2006-2014 *physician health research team from the ACS, Mayo Clinic, AMA, and UW.

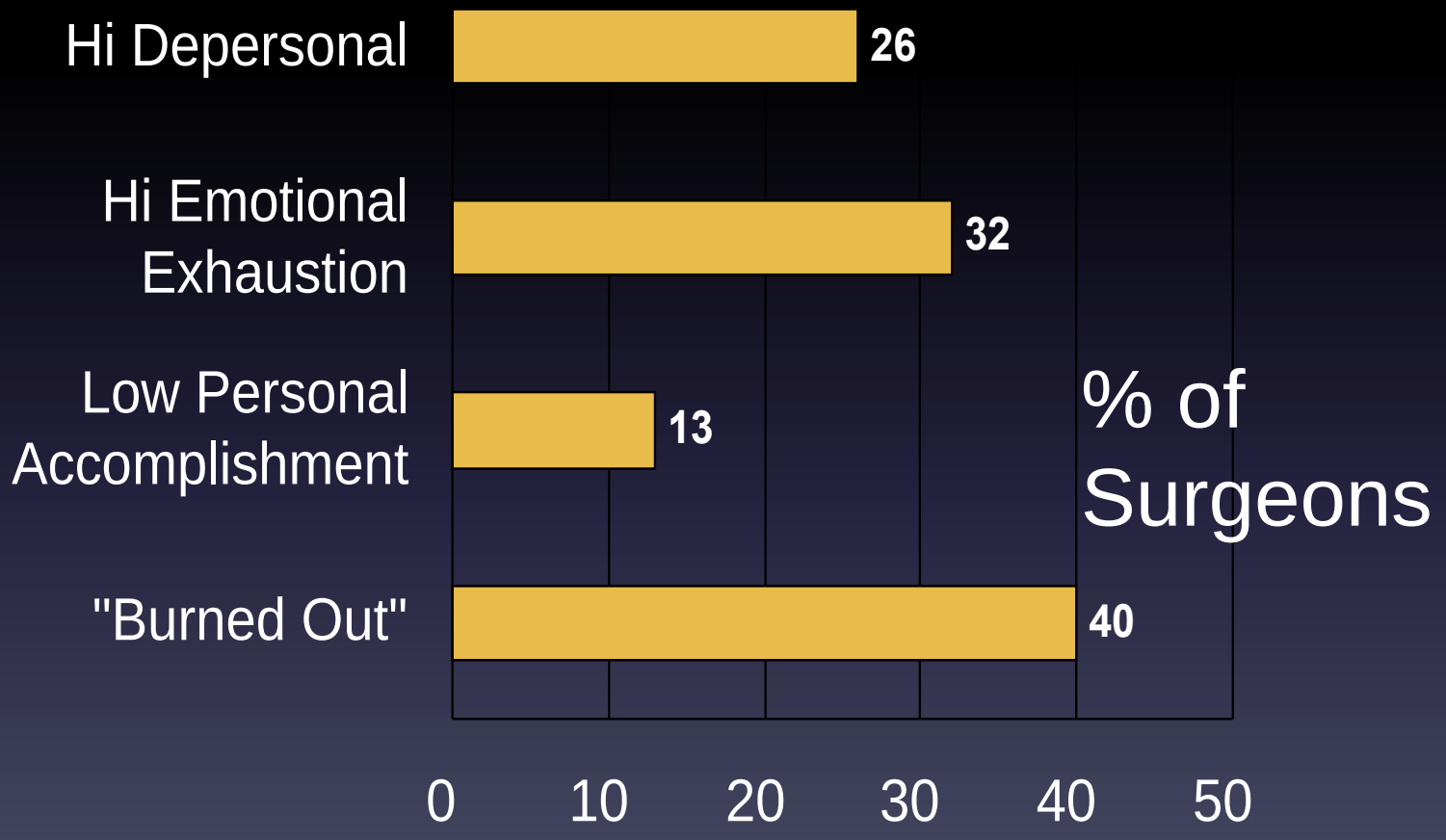
- Tait Shanafelt
- Lotte Dyrbye
- Charles Balch
- Daniel Satele
- Jeff Sloan
- John Hanks
- H Nelson
- Amanda Buhl
- P Novotny
- T Rummans
- Mick Oreskovich
- Sonja Boone
- LJ Tan
- Wayne Satile
- CP West
- Krista Kaups
- Julie Freischlag
- JM Colaiano
- Charles Meredith
- Jerry Beauchamps
- Tom Russell
- K Shwartz

* 33 publications over 8 years

What Do We Know After Eight Years of Study:

1. Burnout is a pervasive problem among physicians in general and among various specialties.

Burnout Domains[1]



1. Balch CM, Freischlag JA, Shanafelt TD. *Arch Surg.* 2009;144(4):371-376.

Identification of Burnout

- *Overwhelming physical and emotional exhaustion*
- *Feelings of cynicism and detachment from the job*
- *A sense of ineffectiveness and lack of accomplishment*
- *Over identification*
- *Irritability and hyper vigilance*

Adapted from Kearney MK. Self-Care of Physicians Caring for Patients at the End Of Life. *JAMA.* 2009;301:1155-1164

Identification of Burnout

- *Sleep problems, including nightmares*
- *Social withdrawal*
- *Professional and personal boundary violations*
- *Poor judgment*
- *Perfectionism and rigidity*
- *Questioning the meaning of life*

Adapted from Kearney MK. Self-Care of Physicians Caring for Patients at the End Of Life. *JAMA.* 2009;301:1155-1164

From: **Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population**

Arch Intern Med. 2012;():1-9. doi:10.1001/archinternmed.2012.3199

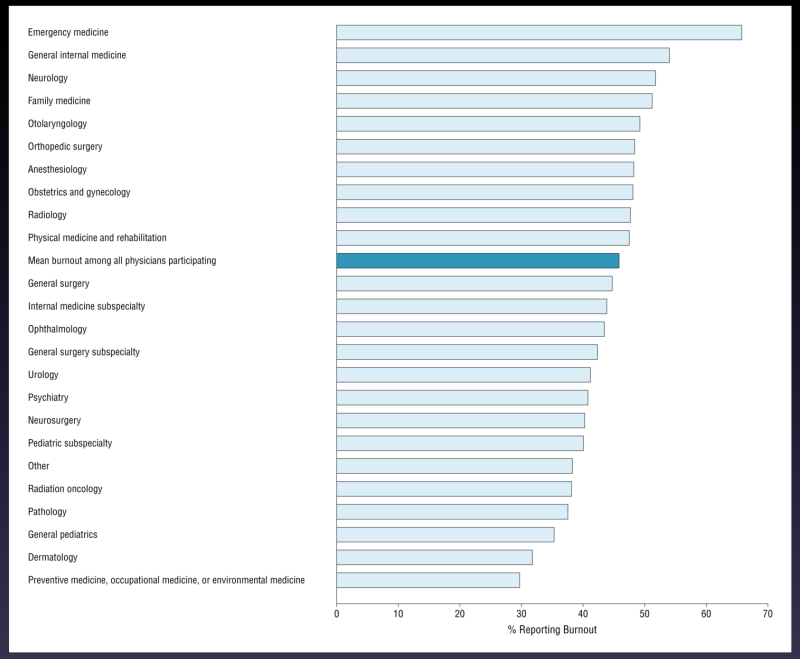
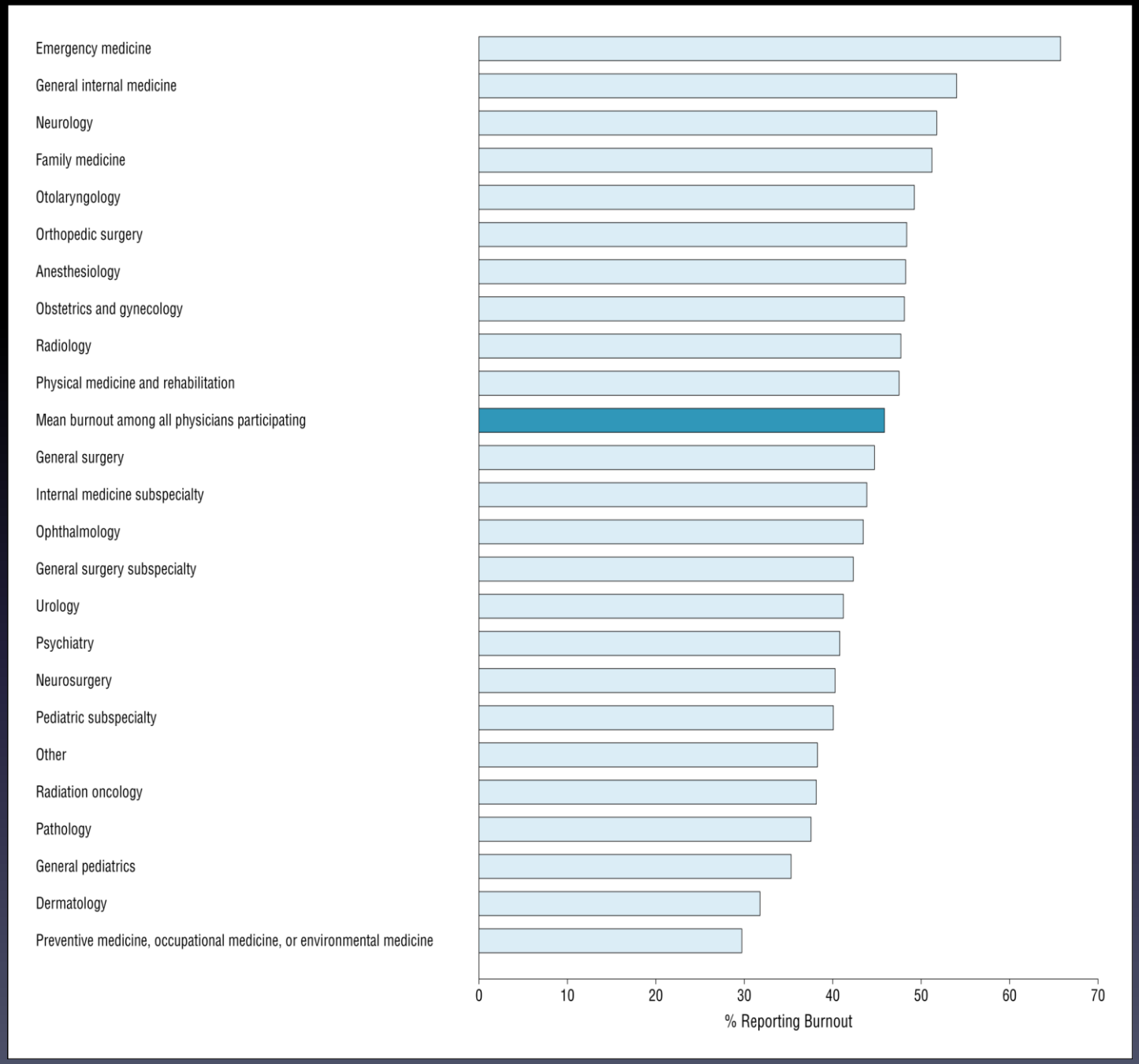


Figure Legend:

Figure 1. Burnout by specialty.


Emergency medicine
General internal medicine
Neurology
Family medicine
Otolaryngology
Orthopedic surgery
Anesthesiology
Obstetrics and gynecology
Radiology
Physical medicine and rehabilitation
Mean burnout among all physicians participating
General surgery
Internal medicine subspecialty
Ophthalmology
General surgery subspecialty
Urology
Psychiatry
Neurosurgery
Pediatric subspecialty
Other
Radiation oncology
Pathology
General pediatrics
Dermatology
Preventive medicine, occupational medicine, or environmental medicine
0
10
20
30
40
50
60
70
% Reporting Burnout

What Do We Know After Eight Years of Study:

2. We know there is a highly statistically significant association between burnout and alcohol abuse or dependence.

Prevalence of Alcohol Use Disorders Among American Surgeons

Michael R. Oreskovich, MD; Krista L. Kaups, MD; Charles M. Balch, MD; John B. Hanks, MD; Daniel Satele, BA; Jeff Sloan, PhD; Charles Meredith, MD; Amanda Buhl, MPH; Lotte N. Dyrbye, MD, MHPE; Tait D. Shanafelt, MD

Arch Surg. 2012;147(2):168-174

Table 2. Univariate Relationship Between Alcohol use and Burnout, Depression, Suicidal Ideation, Quality of Life, and Career Satisfaction

	alcohol misuse			alcohol abuse or dependence		
	Symptoms of alcohol misuse by **AUDIT C**[1] N (%)	No symptoms of alcohol misuse N (%)	P value	Symptoms of alcohol abuse or dependence by **AUDIT C**[2] N (%)	No symptoms alcohol abuse or dependence N (%)	P value
BURNOUT						
Overall Burnout[3]	730 (29.6%)	1172 (25.3%)	0.0001	387 (34.9%)	1515 (25.3%)	<0.0001
DEPRESSION						
Screen + symptoms depression	1036 (42%)	1745 (37.8%)	0.0005	547 (49.5%)	2234 (37.4%)	<0.0001
SUICIDAL IDEATION						
Yes	150 (6.1%)	173 (3.7%)	<0.0001	88 (7.9%)	235 (3.9%)	<0.0001
No	2314 (93.9%)	4444 (96.3%)		1022 (92.1%)	5736 (96.1%)	
QUALITY OF LIFE						
Mean overall QOL	7.4	7.4	0.6620	7.2	7.4	<0.0001
Mean mental QOL	7.1	7.3	<0.0001	6.8	7.3	<0.0001
Mean physical QOL	6.9	6.9	0.4721	6.6	7.0	<0.0001

What Do We Know After Eight Years of Study:

3. We know there is a highly statistically significant association between burnout and suicidal ideation.

From: **Special Report: Suicidal Ideation Among American Surgeons**

Arch Surg. 2011;146(1):54-62. doi:10.1001/archsurg.2010.292

Table 4. Distress Among Surgeons With and Without SI in the Previous 12 Months

	No. (%)				
	SI (n=501)	No SI (n=7324)	Adjusted OR (95% CI)	Effect Size SD, %	*P* Value[a]
Burnout, mean					
Emotional exhaustion score	30.5	20.3	1.069 (1.061-1.077)	83.9	<.001
Depersonalization score	10.4	6.4	1.109 (1.094-1.124)	71.0	<.001
Personal accomplishment score	37.9	40.8	0.946 (0.935-0.957)	45.4	<.001
QOL, mean					
Mental QOL score	37.4	49.6	0.906 (0.899-0.914)	122.9	<.001
Physical QOL score	52.9	53.5	0.986 (0.973-0.999)	8.9	.03
Depression symptoms					
Screen positive	390 (77.8)	1938 (26.5)	9.758 (7.848-12.134)	. . .	<.001
Sought psychiatric/psychologic help in previous 12 mo	130 (26.0)	424 (5.8)	5.682 (4.454-7.092)	. . .	<.001
Reluctant to seek depression help because of repercussions for medical license	301 (60.1)	2721 (37.4)	2.525 (2.096-3.040)	. . .	<.001
Used depression medication in previous 12 mo	109 (21.8)	350 (4.8)	5.525 (4.367-7.042)	. . .	<.001
Person who prescribed depression medication					
I prescribed for myself	17 (15.7)	24 (6.9)	2.538 (1.307-4.926)	. . .	.006
Colleague prescribed even though I am not his/her patient	11 (10.2)	23 (6.6)	1.613 (0.759-3.426)	. . .	.21
Professional of whom I am a patient	80 (74.1)	276 (78.9)	0.766 (0.464-1.264)	. . .	.30
Other	0	27 (7.7)	[b]	. . .	.98

Abbreviations: CI, confidence interval; OR, odds ratio; QOL, quality of life; SI, suicidal ideation.
[a] *P* values are for difference in mean scores. Statistical significance of OR is indicated by 95% CI.
[b] Unable to calculate.

Figure Legend:

Distress Among Surgeons With and Without SI in the Previous 12 Months

What Do We Know After Eight Years of Study:

4. We know that burnout and depression often go hand in hand.

From: **Special Report: Suicidal Ideation Among American Surgeons**

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[a] *P* values are for difference in mean scores. Statistical significance of OR is indicated by 95% CI.
[b] Unable to calculate.

What Do We Know After Eight Years of Study:

5. We know that alcohol abuse has a strong association with medical errors.

TABLE 3: Factors Independently Associated with Symptoms of Alcohol Abuse/Dependence (Score >/=5 for men or >/= 4 per women (see methods)

Response	Independent Predictor	OR	P-value
Symptoms of Alcohol Abuse or Dependence (AUDIT C^2)	Male (vs. Female)	0.555 (0.458-0.671)	<0.0001
	Partnered (vs. Single)	2.285 (1.523-3.431)	<0.0001
	Have children	0.768 (0.605-0.976)	0.0306
	Hours worked per week (for each additional hour)	0.989 (0.984-0.993)	<0.0001
	Nights on call per week (for each additional night)	0.942 (0.909-0.977)	0.0012
	Other practice (vs. Private)	0.711 (0.548-0.923)	0.0104
	Veterans practice (vs. Private)	0.462 (0.257-0.832)	0.0100
	Burned out	1.249 (1.056-1.478)	0.0095
	+ Depression Screen	1.475 (1.258-1.730)	<0.0001
	Major error in last 3 months	1.447 (1.174-1.784)	0.0005
	Age (for each additional year older)	0.985 (0.977-0.993)	0.0001

What Do We Know After Eight Years of Study:

6. We know that burnout is a much bigger problem among physicians in comparison to their cohorts in other professions

Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population

Tait D. Shanafelt, MD; Sonja Boone, MD; Litjen Tan, PhD; Lotte N. Dyrbye, MD, MHPE; Wayne Sotile, PhD; Daniel Satele, BS; Colin P. West, MD, PhD; Jeff Sloan, PhD; Michael R. Oreskovich, MD

Online First, August 20,2012, Arch Intern Med

AMA, Mayo Clinic, UW Study

- Purpose: could we replicate the ACS results; differences in specialties; compare to non-physicians
- Method: similar to ACS study; large sample from AMA Physician Masterfile; compare to probability-based sample of US population

Methodology

- Invitation to 89,831 US physicians with representative sample for each specialty
- 27,276 acknowledged receipt
- 7,288 completed survey
- Compared to 2010 population control sample of 3,442 non-physicians

Study Measures

- Burnout: full 22 item MBI and the 2 item MBI (emotional exhaustion and depersonalization)
- Depression and SI: 2 item PRIMEMD and single SI question
- Likert scales for satisfaction with Work-Life Balance

Results: Burnout

- 37.9% of US physicians had high emotional exhaustion (no emotional response to positive stimuli)
- 29.4% had high depersonalization (cynical patient detachment)
- 12.4% low sense of personal accomplishment (low self-esteem, worthlessness)
- In aggregate, 45.8 of US physicians are burned-out!

Results: Depression

- 37.8% screened positive for depression
- 6.4% SI in the preceding 12 months

From: **Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population**

Arch Intern Med. 2012;():1-9. doi:10.1001/archinternmed.2012.3199

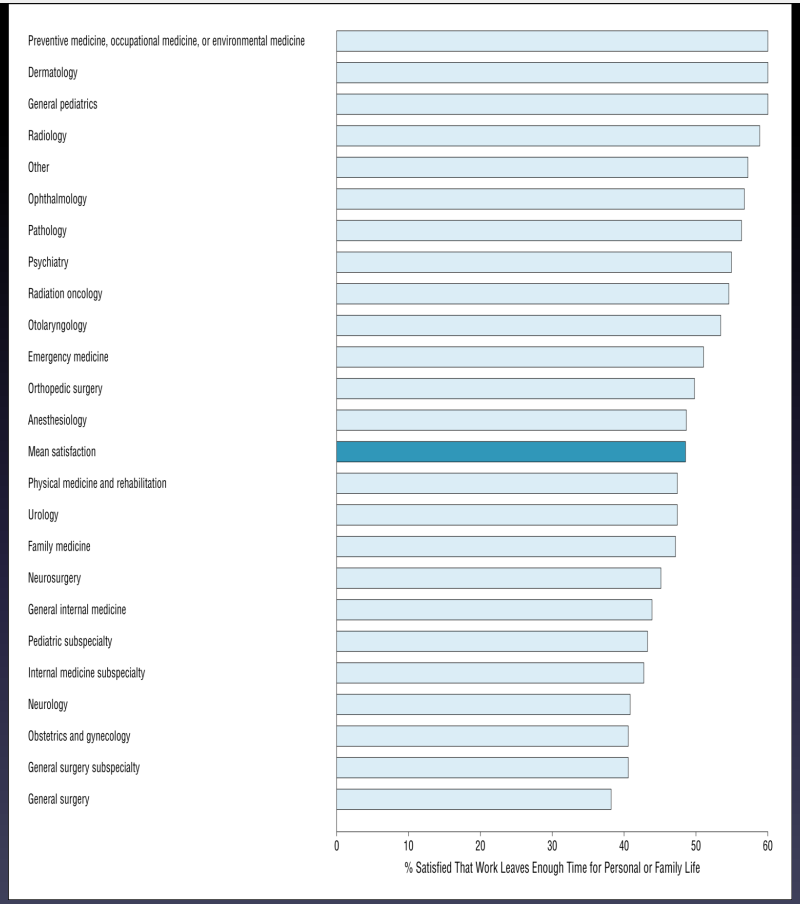
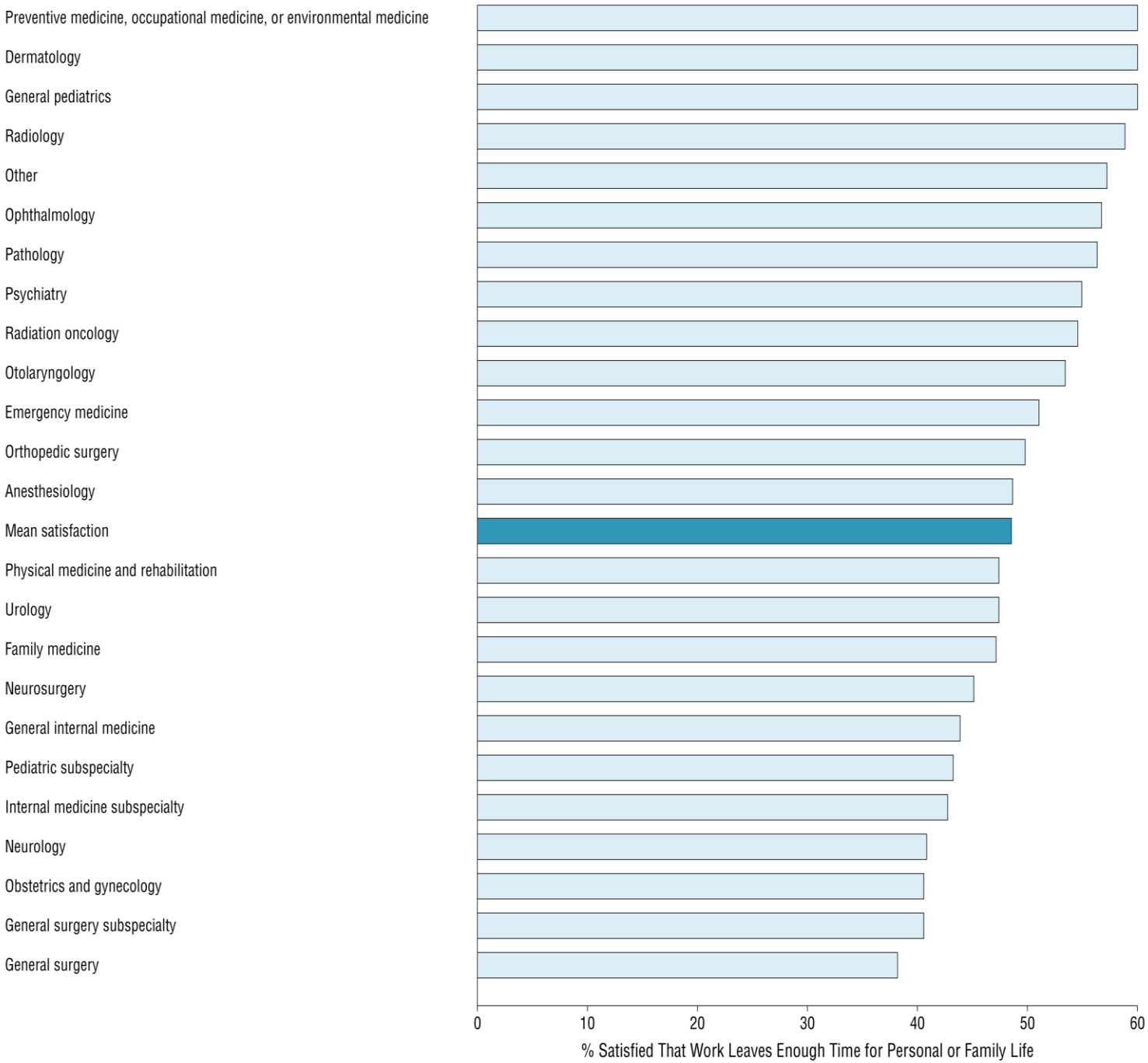


Figure Legend:

Figure 2. Satisfaction with work-life balance by specialty.

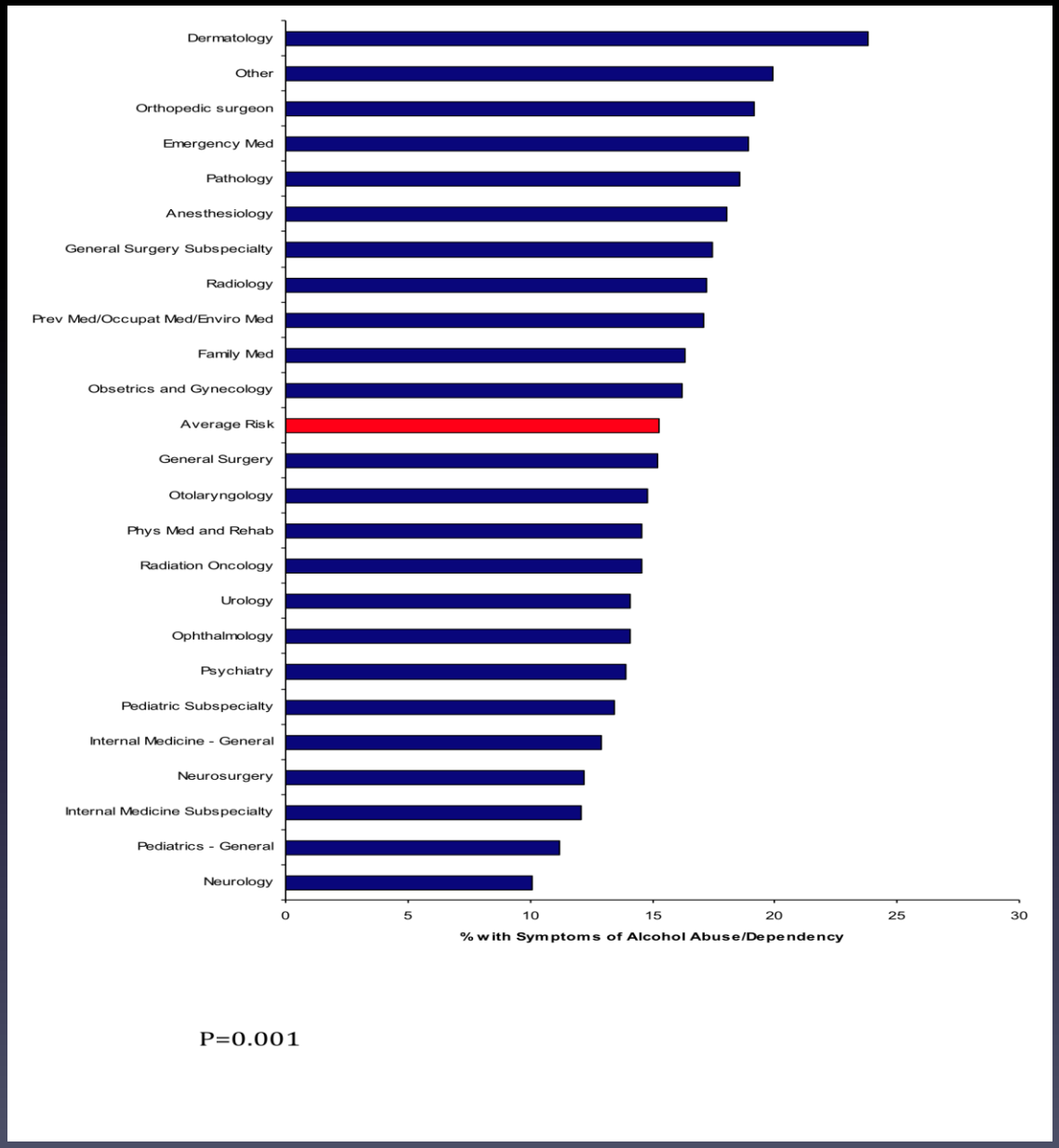

Preventive medicine, occupational medicine, or environmental medicine
Dermatology
General pediatrics
Radiology
Other
Ophthalmology
Pathology
Psychiatry
Radiation oncology
Otolaryngology
Emergency medicine
Orthopedic surgery
Anesthesiology
Mean satisfaction
Physical medicine and rehabilitation
Urology
Family medicine
Neurosurgery
General internal medicine
Pediatric subspecialty
Internal medicine subspecialty
Neurology
Obstetrics and gynecology
General surgery subspecialty
General surgery
0
10
20
30
40
50
60
% Satisfied That Work Leaves Enough Time for Personal or Family Life

The Prevalence of Substance Use Disorders in American Physicians

Michael R. Oreskovich[1],
Tait Shanafelt[2],
Lotte N. Dyrbye[2]
Litjen Tan[3],
Wayne Sotile[3]
Daniel Satele[2]
Colin P. West[2]
Jeff Sloan[2]
Sonja Boone[3]

[1] University of Washington
[2] Mayo Clinic
[3] American Medical Association

Alcohol Abuse or Dependency by Specialty



P=0.001

Relationship between Presence of Alcohol Abuse/Dependence and Major Medical Errors

Symptoms of alcohol abuse or dependence by AUDIT-C (N=1100)

- **Major medical error last 3 months:**
- Yes = 10.9%
- No = 89.1%

No Symptoms of alcohol abuse or depdendence by AUDIT-C (N=6109)

- **Major medical error last 3 months:**
- Yes = 7.9%
- No = 92.1%

p=0.0011

Table 2: Univariate Relationship Between Alcohol Abuse/Dependence and Burnout, Depression, Suicidal Ideation, Quality of Life, and Career Satisfaction

	Symptoms of alcohol abuse or dependence by **AUDIT C**[1] N (%) (N=1100)	No symptoms alcohol abuse or dependence By **AUDIT C**[1] N (%) (N=6109)	P value
BURNOUT			
Overall Burnout[2]	575 (52.5%)	2715 (44.7%)	<0.0001
DEPRESSION			
Screen + symptoms depression	495 (45.2%)	2235 (36.9%)	<0.0001
SUICIDAL IDEATION			0.0004
Yes	97 (8.8%)	365 (6.0%)	
No	1000 (91.2%)	5723 (94.0%)	
QUALITY OF LIFE			
Mean overall QOL	7.0	7.3	<0.0001
Mean mental QOL	6.6	6.8	0.0047
Mean physical QOL	6.7	7.1	<0.0001
Mean Emotional QOL	7.0	8.0	<0.0001
Average Level of Fatigue	5.7	5.9	0.0848
CAREER SATISFACTION			
Would become physician again?	729 (66.5%)	4311 (70.9%)	0.0036
Would you recommend your children pursue a career as a physician?	453 (53.2%)	2863 (55.4%)	0.2436

[1] Score >/=5 for men or >/= 4 per women (see methods)
[2] Based on high score of EE (>27) or DP (>10) on the Maslach Burnout Inventory

TABLE 3: Factors Independently Associated with Symptoms of Alcohol Abuse/Dependence

Response	Ind. Predictor	OR	P-Value
Symptoms of Alcohol Abuse or Dependence (AUDIT C)	Age (for each additional year older)	0.985 (0.978-0.992)	<0.0001
	Hours worked per week (for each additional hour)	0.994 (0.989-0.998)	0.0094
	Male (vs. Female)	0.597 (0.506-0.704)	<0.0001
	Married (vs. Single)	1.296 (1.009-1.666)	0.0424
	Partnered (vs. Single)	1.989 (1.364-2.899)	0.0003
	Have Children (vs. not)	0.745 (0.607-0.915)	0.0049
	Recent Work/Home Conflict (vs. none)	0.843 (0.718-0.989)	0.0364
	Positive Depression Screen (vs. negative)	1.304 (1.122-1.517)	0.0006
	Most recent conflict resolved in favor of work (vs. resolved to meet both responsibilities)	1.287 (1.088-1.524)	0.0033
	Dermatologist (vs Internal Medicine - General)	1.902 (1.182-3.058)	0.0080
	Orthopedic Surgeon (vs. Internal Medicine – General)	2.071 (1.351-3.176)	0.0008
	Other (Miscellaneous) Specialty (vs. Internal Medicine – General)	1.757 (1.176-2.625)	0.0060

"Burnout stems from work-related stress. Preliminary evidence suggests that excessive workloads (eg, work hours, on-call responsibilities), subsequent difficulty balancing personal and professional life, and deterioration in work control, autonomy, and meaning in work contribute to burnout in physicians. Some aspects of health care reform are likely to exacerbate many of these stressors and thus may have the unintended consequence of increasing physician burnout".

Physician Burnout: A Potential Threat to Successful Health Care Reform
Liselotte N. Dyrbye, MD, MHPE; Tait D. Shanafelt, MD
JAMA. 2011;305(19):2009-2010. doi:10.1001/jama.2011.652.

An Interactive Individualized Intervention to Promote Behavioral Change to Increase Personal Well-Being in US Surgeons

Shanafelt, Tait D. MD*; Kaups, Krista L. MD, MSc†; Nelson, Heidi MD*; Satele, Daniel V. BS*; Sloan, Jeff A. PhD*; Oreskovich, Michael R. MD‡; Dyrbye, Lotte N. MD*

- Methods: Surgeons who were members of the American College of Surgeons were invited to participate in an intervention study. Participating surgeons completed a 3-step, interactive, electronic intervention. First, surgeons subjectively assessed their well-being relative to colleagues. Second, surgeons completed the 7-item Mayo Clinic Physician Well-Being Index and received objective, individualized feedback about their well-being relative to national physician norms. Third, surgeons evaluated the usefulness of the feedback and whether they intended to make specific changes as a result.
- Results: A total of 1150 US surgeons volunteered to participate in the study. Surgeons' subjective assessment of their well-being relative to colleagues was poor. A majority of surgeons (89.2%) believed that their well-being was at or above average, including 70.5% with scores in the bottom 30% relative to national norms. After receiving objective, individualized feedback based on the Mayo Clinic Physician Well-Being Index score, 46.6% of surgeons indicated that they intended to make specific changes as a result. Surgeons with lower well-being scores were more likely to make changes in each dimension assessed (all *P*s < 0.001).

Annals of Surgery
Volume 259(1), January 2014, p 82–88

During the past month . . .

have you felt burned out from your work?

have you worried that your work is hardening you emotionally?

have you often been bothered by feeling down, depressed, or hopeless?

have you fallen asleep while stopped in traffic or driving?

have you felt that all the things you had to do were piling up so high that you could not overcome them?

have you been bothered by emotional problems (such as feeling anxious, depressed, or irritable)?

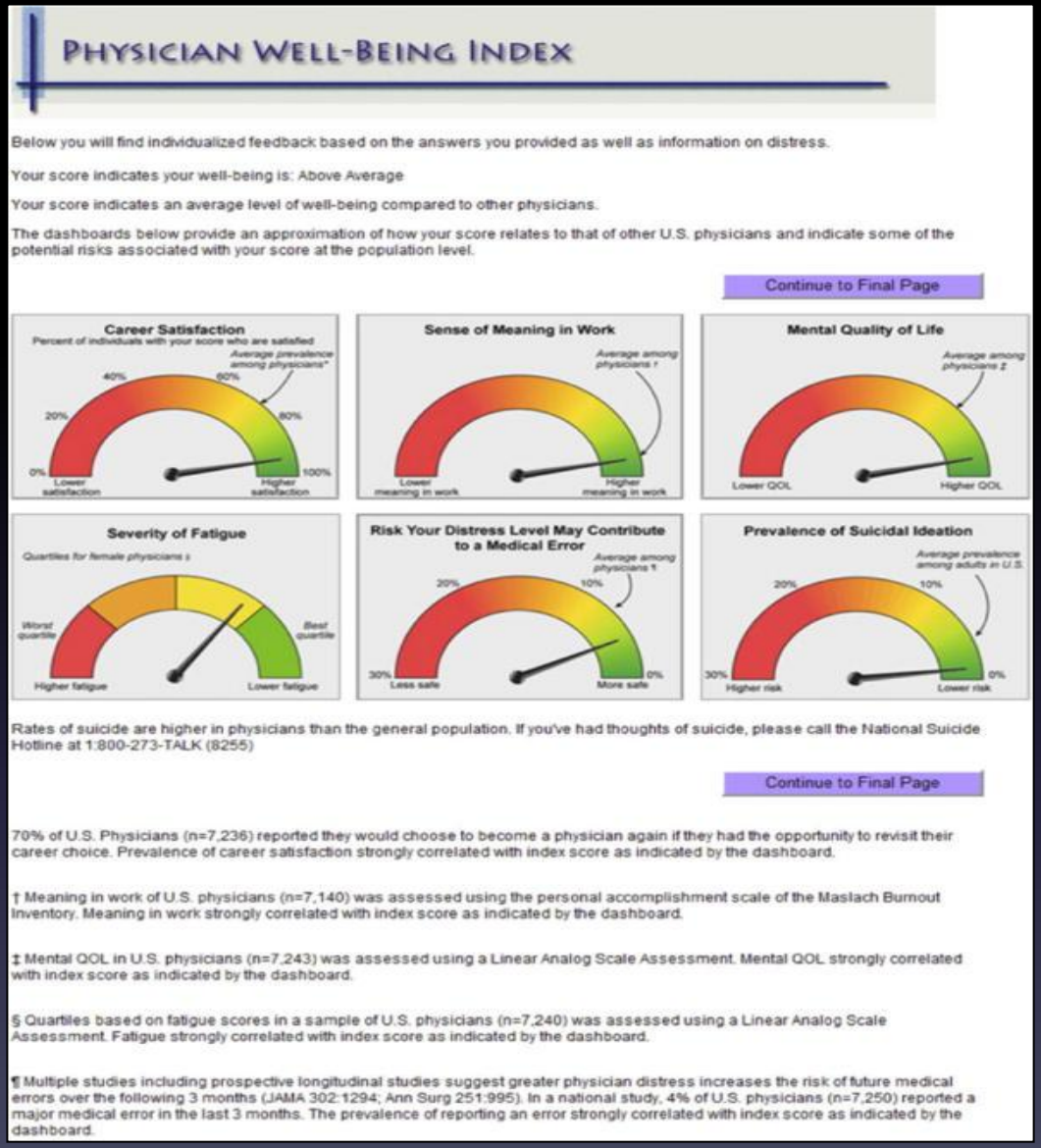
has your physical health interfered with your ability to do your daily work at home and/or away from home?

*Each question is answered using a yes/no scale. Basic scoring systems and weighted scoring approaches that may improve sensitivity and specificity for predicting specific outcomes (eg, mental quality of life; suicidal ideation) are reviewed in reference 31.

TABLE 1 . Mayo Clinic Physician Well-Being Index

Behavioral Change to Increase Personal Well-Being in US Surgeons.
Shanafelt, Tait; Kaups, Krista; MD, MSc; Nelson, Heidi; Satele, Daniel; Sloan, Jeff; Oreskovich, Michael; Dyrbye, Lotte

Annals of Surgery. 259(1):82-88, January 2014.
DOI: 10.1097/SLA.0b013e3182a58fa4



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Annals of Surgery. 259(1):82-88, January 2014.
DOI: 10.1097/SLA.0b013e3182a58fa4

FIGURE 1. Example of individualized feedback provided to surgeons completing the online self-assessment using the MPWBI. QOL indicates quality of life.

FIGURE 4

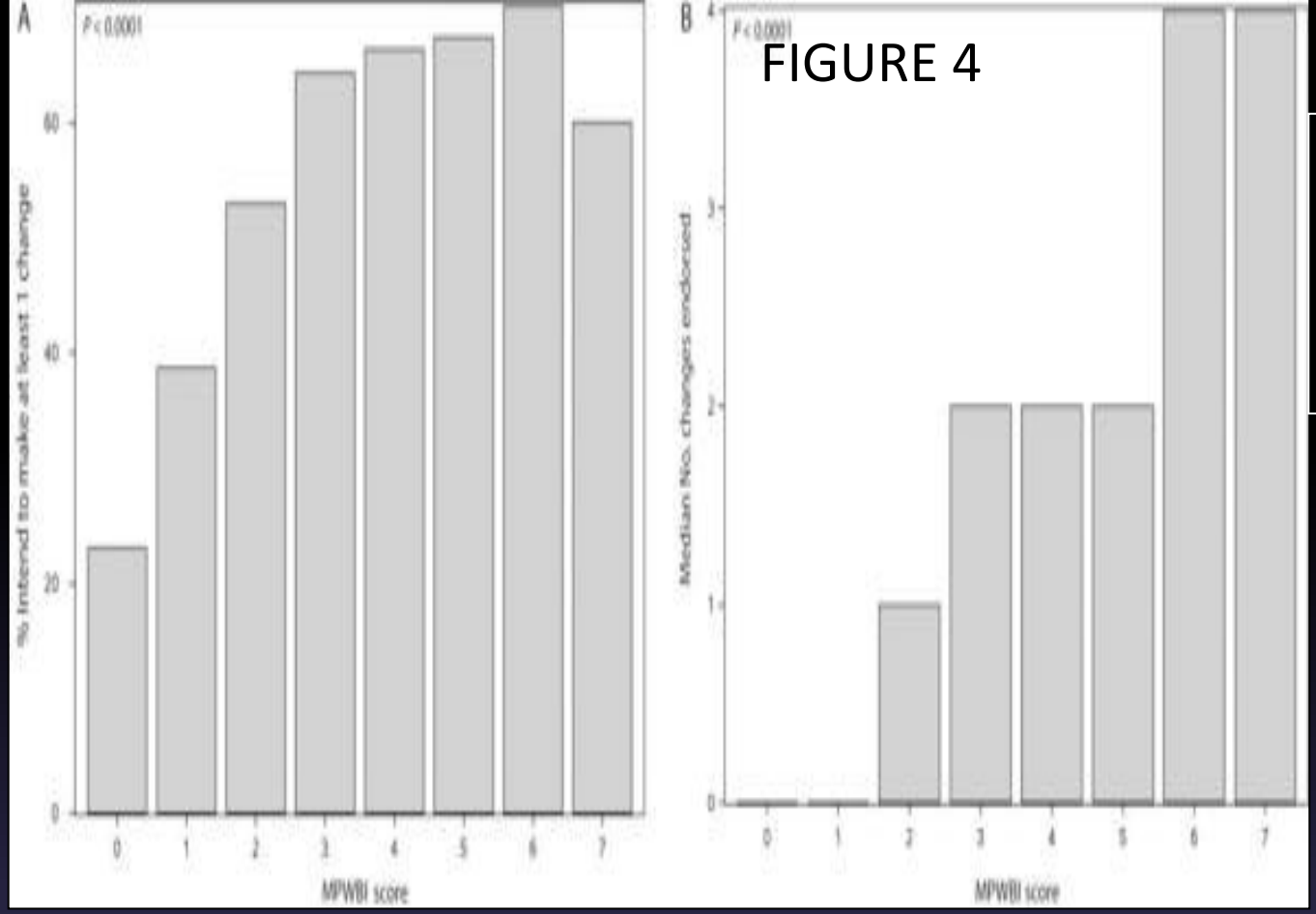

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FIGURE 4 . MPWBI score and intent to make changes. MPWBI scores are shown on the x axis (higher scores indicate greater levels of distress) of each figure. A, The proportion of surgeons who indicated they were considering making changes in at least 1 of the 4 dimensions assessed (Fig. 3) as a direct result of the individualized feedback they received is shown on the y axis. B, The median number of changes (range = 1-4) being considered is shown on the y axis. MPWBI indicates Mayo Physician Well-Being Index.

Conclusions about Burnout

1. High prevalence in physician as a whole with over-representation in certain specialties
2. Those with burnout are more likely to abuse substances, become depressed and suicidal, make medical errors, and be markedly dissatisfied with both their professional and personal lives.

Conclusions about Burnout

3. Burnout is easily recognizable
4. Burnout is reversible
5. Burnout is treatable

Conclusions about Burnout

6. Identifying and treating burnout will decrease the risks of depression, suicide, substance abuse, medical errors, and personal and professional losses

Conclusions about Burnout

7. Prevention of burnout will prevent physician impairment.


Thank you so much!
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