“That physician will hardly be thought very careful of the health of his patients if he neglects his own.”

- Galen 130-200 AD
Finding Meaning, Balance, and Personal Satisfaction in the Practice of Medicine

Tait Shanafelt, MD

Associate Professor of Medicine
Hematology/Oncology

Director, Program on Physician Well-being
Mayo Clinic Department of Medicine
Outline

I. What’s happening to doctors? (What is burnout?)
II. What are the ramifications? (Why should we care?)
III. What are the causes of this problem?
IV. What’s the solution?
Dissatisfaction with Medical Practice

What’s happening to doctors?

Confronting Depression and Suicide in Physicians
A Consensus Statement
Differences between residents and specialists

Burnout among American surgeons

Changes in Career Satisfaction Among Primary Care and Specialist Physicians 1997-2001
Canadian National Physician Survey

Sullivan, CMAJ 159:525 (1998)

- >3500 physicians responding (RR 44%)
- 62% Workload too heavy
- 55% Family & personal life suffers because physician
- 65% Opportunities to change career limited
Career Satisfaction
(U.S. Surgeons n=7905)

- 71% responders would become physician again
- 51% would recommend their children become physician/surgeon
- 36% work schedule leaves enough time for personal/family life

Primary Care Physicians

- 422 family + general internal medicine physicians
- 53% time pressure during office visits
- 48% work pace chaotic
- 78% little control over work
- 27% burned out
- Time pressure, chaotic environment, low control, organizational culture associated with:
  - burnout, low satisfaction, intent to leave
Burnout Among American Surgeons
Campbell, Surgery 130:696 (2001)

- ~ 750 American Surgeons
- Among practicing responders ~ 32% burned out
- No difference by practice setting
- Burnout > among younger surgeons (p<0.01)
- Sense of imbalance work/family/personal growth correlated with burnout
- Burnout correlated with consider early retirement
Burnout Among Nurses

- 10,184 hospital based nurses in Pennsylvania
- 43% burned out
- Patient - nurse staffing ratios strongly related to burnout and job satisfaction
- Approximately 23% increased risk burnout for each 1 additional patient per nurse
- Intent to leave current job next 12 months:
  - Burned out nurses = 43%
  - Nurses without burnout = 11%

Aiken JAMA 288:1987
What is Burnout?

Burnout is a syndrome of depersonalization, emotional exhaustion, and low personal accomplishment leading to decreased effectiveness at work.
Maslach Burnout Inventory

- Developed 1980, validation over last 30 years.
- 22 item survey evaluates the 3 domains of burnout.
- Respondents rate frequency on 7 point Likert scale.
- 3 Sub-Scales: Depersonalization, Emotional Exhaustion and Low Personal Accomplishment
- Normative national samples of like professionals
Burnout in Other Specialties

Family Medicine: 43-54% burned out

General IM and Hospitalists: ~27% burned out

Gastroenterology: ~31% burned out

Infectious Disease: ~43.5% burned out

Intensivists: ~33% burned out

Emergency medicine: ~60% burned out

Burnout in Physician Leaders

- **Academic Chairs:**

<table>
<thead>
<tr>
<th>Department</th>
<th>High EE</th>
<th>High DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ob/Gyn (n=119)</td>
<td>56%</td>
<td>36%</td>
</tr>
<tr>
<td>Ophthalmology (n=101)</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>Otolaryngology (n=107)</td>
<td>26%</td>
<td>13%</td>
</tr>
<tr>
<td>Med School Deans (n=90)</td>
<td>40%</td>
<td>24%</td>
</tr>
</tbody>
</table>

- **Biggest sources of stress:** budgets, billing audits, loss key faculty, staff dismissals, malpractice suit

Gabbe AJ OG 186:601; Cruz Opthal 114:2350; Johns Laryngoscope 115:2056; Gabbe Acad Med 83:476
Why Should We Care?
Professional Consequences of Burnout

Adverse Influence On:

- Patient satisfaction\(^1\)
- Patient compliance\(^2\)
- Turnover/absenteeism\(^3\)
- Detrimental attitudes: cynicism, resentment\(^4\)
- Intent to leave academic medicine\(^3\)

\(^1\) Health Psych 12:93; \(^2\) J GI M 15:122; \(^3\) Arch IM 169:990; \(^4\) J GI M 22:177
Association of Perceived Medical Errors With Resident Distress and Empathy
A Prospective Longitudinal Study

Colin P. West, MD, PhD
Mashele M. Huschka, BS
Paul J. Novotny, MS
Jeff A. Sloan, PhD
Joseph C. Kolars, MD
Thomas M. Habermann, MD
Tait D. Shanafelt, MD

Context  Medical errors are associated with feelings of distress in physicians, but little is known about the magnitude and direction of these associations.

Objective  To assess the frequency of self-perceived medical errors among resident physicians and to determine the association of self-perceived medical errors with resident quality of life, burnout, depression, and empathy using validated metrics.

Design, Setting, and Participants  Prospective longitudinal cohort study of categorical and preliminary internal medicine residents at Mayo Clinic Rochester. Data were provided by 184 (84%) of 219 eligible residents. Participants began training in the 2003-2004, 2004-2005, and 2005-2006 academic years and completed surveys...
Errors Among U.S. Surgeons

- Anonymous, cross-sectional survey, June 2008
- ACS members current e-mail (n=24,922)
- Response rate 32% (n=7905)
- 61 item survey including standard tools assess:
  - Burnout
  - Mental and physical QOL
  - Symptoms of depression
- “Are you concerned you have made any major medical errors in the last 3 months?”
  - Self-reported errors high correlation events medical record

In press Annals of Surgery; JGLM 16:809
Medical Errors:

- Definition\(^1\):
  A commission or omission with potentially negative consequences for the patient that would have been judged wrong by skilled and knowledgeable peers at the time it occurred, independent of whether there were any negative consequences.

- Distinct from complications

- Do not necessarily = harm to patient
  - 53% self-perceived errors impact patients some studies\(^2\)

\(^1\) JAMA 265:2089 \(^2\) JGIM 21:165
Self-reported Major Medical Errors Among U.S. Surgeons (n=7905)

- 9% of Surgeons Report Major Error last 3 months

<table>
<thead>
<tr>
<th></th>
<th>OR Reporting Error</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Each 1 point increase EE</td>
<td>1.05</td>
<td>&lt;0.0001</td>
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<tr>
<td>Each 1 point increase DP</td>
<td>1.11</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Each 1 point decrease PA</td>
<td>0.97</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Screen + depression</td>
<td>3.21</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

In press Annals of Surgery
Emotional Exhaustion and Errors

Emotional Exaustion

% Major Medical Error in Last 3 Mo

Low EE 4.85%
Int EE 9.46%
High EE 14.69%

In press Annals of Surgery
Do errors lead to distress?

OR

Does distress lead to errors?
# Medical Errors Lead to Distress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Instrument</th>
<th>Effect of error</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>MBI-DP</td>
<td>+2.45</td>
<td>.002</td>
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<tr>
<td></td>
<td>MBI-EE</td>
<td>+4.58</td>
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</tr>
<tr>
<td></td>
<td>MBI-PA</td>
<td>-2.59</td>
<td>.002</td>
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<tr>
<td>Depression</td>
<td>Positive 2-item</td>
<td>OR 3.29</td>
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<tr>
<td></td>
<td>screen</td>
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</table>

West JAMA 296:1071
## Distress Leads to Medical Errors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Instrument</th>
<th>OR of subsequent error</th>
<th>p</th>
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<tbody>
<tr>
<td>Burnout</td>
<td>MBI-DP</td>
<td>1.10</td>
<td>.001</td>
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<td></td>
<td>MBI-PA</td>
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<td>.02</td>
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<tr>
<td>Depression</td>
<td>Positive 2-item</td>
<td>1.93</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>screen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

West JAMA 296:1071
Burnout Among Nurses

- Patient - nurse staffing ratios strongly related to not only burnout but patient mortality

- Patients at ~7% increased risk death for each additional patient per nurse
  - Increasing 2 pts/nurse = ~2 additional deaths/1000 patients

Patient: Nurse Ratio

Nurse Burnout  ?  Patient Outcome

Aiken JAMA 288:1987
The human/ personal cost of burnout

- Loss of idealism and commitment
- Loss of sense work is meaningful (cynicism)
- Feelings of guilt and unworthiness
- Loss of direction/purpose
Depression Among Physicians

- Prevalence = general population
  - 12% lifetime – male physicians
  - 19.5% lifetime – female physicians

- Higher rates of suicide in physicians
  - RR 1.1 - 3.4 in male physicians
  - RR 2.5 - 5.7 in females physicians

- Suicide is a disproportionately high cause of mortality in physicians relative other professionals

Proportionate Mortality Ratio:
Male Physicians vs Male Professionals

Does Burnout Contribute to Physician Suicide?

- Study burnout/QOL medical students at 7 institutions (n=4287)
- Each 1 point increase depersonalization or emotional exhaustion associated 6-10% increase odds suicidal ideation following year

Burnout & Suicidal Ideation

Emotional exhaustion

Burnout & Suicidal Ideation

26% of students with suicidal ideation in the last year.

- Never Burned out (n=290)
- Recovered from Burnout (n=99)
- New Burnout (n=132)
- Chronic Burnout (n=271)
Suicidal Ideation Among Surgeons

- 501 (6.4%) U.S. surgeons thought of suicide last 12 months
- 26% surgeons SI sought psychiatric help
- 60% SI reluctant to seek help for treatment of depression due repercussions medical license
### Factors Associated with Suicidal Ideation on Multi-variable Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>OR</th>
<th>p</th>
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<tbody>
<tr>
<td>+ Depression screen</td>
<td>7.0</td>
<td>&lt;0.001</td>
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<tr>
<td>Burnout</td>
<td>1.9</td>
<td>&lt;0.001</td>
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<tr>
<td>Perceived error last 3 mo</td>
<td>1.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Youngest child age 19-22</td>
<td>1.6</td>
<td>0.004</td>
</tr>
<tr>
<td>Incentive pay only</td>
<td>0.8</td>
<td>0.035</td>
</tr>
<tr>
<td>Married</td>
<td>0.7</td>
<td>0.002</td>
</tr>
<tr>
<td>Practice academic medical center</td>
<td>0.6</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Archives Surgery In press*
What are the Causes of Burnout?
Causes of Physician Distress

- ↑ clinical demands
- Decreased autonomy
- ↑ government/reimbursement issues
- Decreased time with patients
- Difficulty balancing personal & professional lives
Workload and Burnout
(U.S. Surgeons; n=7905)

Hrs worked/Week

Nights On Call/Week

p<0.001

p<0.001
Other Causes Physician Distress

- Frequent delivery of bad news
- Patient suffering (physical, emotional)
- Management of toxic treatments
- Inability to cure many patients
- Rapidly expanding medical knowledge base
- Patient death
Are physicians at inherent risk? The “Physician Personality”

TRIAD OF COMPULSIVENESS

Doubt

Guilt  Exaggerated Sense Responsibility

Gabbard JAMA 254:2926
The “Physician Personality”

**Adaptive**
- Diagnostic rigor
- Thoroughness
- Commitment to patients
- Desire to stay current
- Recognize responsibility of patients trust

**Maladaptive**
- Difficulty relaxing
- Problem allocating time for family
- Sense responsibility beyond what you control
- Sense “not doing enough”
- Difficulty setting limits
- Confusion of selfishness vs. healthy self-interest
- Difficulty taking time off

Gabbard JAMA 254:2926
Causes of burnout: Work-Home Interference Model


WORK CHARACTERISTICS:
- Call Schedule
- Workload
- Degree of Autonomy

PERSONAL CHARACTERISTICS:
- Marital Status
- Parental status
- Dual Career
- Childcare responsibilities

WORK HOME INTERFERENCE → BURNOUT
Causes of burnout: Work-Home Interference Model


- Survey 293 residents in Netherlands
- Response rate 60% (n=176)
- Evaluated
  - work characteristics
  - home characteristics
  - work-home interference
  - burnout (MBI)
Causes of burnout: Work-Home Interference Model
Burnout

- Excessive Workload
- Problematic Relationship with Supervisor
- Lack of Meaning in Work
- Challenges to Skills to Address
- Inadequate Processing Grief
- Work-Home Interference
- Inadequate Personal Time
What is Well-being?
## Well-being Literature Search


**Since 1887:**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>8072 articles</td>
</tr>
<tr>
<td>Anxiety</td>
<td>57,800 articles</td>
</tr>
<tr>
<td>Depression</td>
<td>70,856 articles</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>5700 articles</td>
</tr>
<tr>
<td>Happiness</td>
<td>2958 articles</td>
</tr>
<tr>
<td>Joy</td>
<td>851 articles</td>
</tr>
</tbody>
</table>
What is Physician Health?

Disease model:

Health = Absence of Disease

Well-being:

Well-being ≠ Absence of burnout/distress
The Science of Happiness
Components of Happiness

- **Pleasure (positive emotions)**
  - Eating ice cream; having sex

- **Engagement (being absorbed)**
  - Training marathon

- **Meaning (serving something larger than self)**
  - Knowledge, goodness, family, community, justice

Components of Happiness

- Pleasure → the pleasant life
- Engagement → the good life
- Meaning → the meaningful life

The full life

Theory: Flow

- Psychologic Selection: Individuals preferentially cultivate a limited subset of activities, values, and personal interests.

- Optimal selection creates “Flow”:
  - Deep concentration
  - Intrinsic motivation
  - High challenges - matched by adequate skills
Designing optimal experiences

- Flow: peak experiences, states of absolute absorption

Challenges

Anxiety

Flow

Boredom

Skills
From theory to practice...
What can I Do for Myself?

● Identify Values
  • What matters to you most?
    – Maximize activities that provide engagement and meaning
  • Balance personal professional life
“Know thyself”
-Socrates
Reflection On Personal Values…

- What is my greatest priority in life? Have I been living life in a way that demonstrates this?
- Do I have adequate balance between my personal and professional life?
- What would I like my life to be like in 10 years?
- How much professional achievement am I willing to sacrifice to accomplish my personal life goals? (be specific)
Achieving Right Balance

- Recognize that your time, talents, energy are limited resources
- Determine which personal & professional goals most important to you
- There is no “right” formula...
Consider 2 Physicians

Both:

- Equal intelligence
- 60 hour work week have similar focus + efficiency
Consider 2 Physicians

Personal time: extra time
patients, serving practice,
providing education in
community, writing papers

Greater income
Greater prestige
Recognition among colleagues

Personal time: family,
personal interests,
hobbies

Closer relationships family + friends
Developed other hobbies
Consider 2 Physicians

Personal time: extra time for patients, serving practice, providing education in community, writing papers

Personal time: family, personal interests, hobbies
Consider 2 Physicians

Personal time: extra time
patients, serving practice, providing education in community, clinical trials

Personal time: family, personal interests, hobbies
How Well Do Physicians Integrate Personal & Professional Lives?

- Residents report “Survival Attitude” - life on hold until the completion of residency

- 37% Oncologists report “Looking forward to retirement” is an essential “wellness promotion strategy”

- Many physicians may maintain strategy of delayed gratification throughout their entire career

Shanafelt, J Sup Oncology 3:157 (2005)
Mentality of Delayed Gratification: Life on Hold

When was the most stressful period of your career:

- Internship/Residency 35%
- Current Position 26%
- Medical School 22%
- Undergraduate 13%
- Fellowship 5%

*Things don’t necessarily get better…*

Shanafelt, J Sup Oncology 3:157 (2005)
Achieving Right Balance

- Honest appraisal personal + professional goals
- Identify where goals may be incompatible
- Determine how to integrate based on values
What can I Do for Myself?

- **Identify Values**
  - Debunk myth of delayed gratification
  - What matters to you most?
  - Balance personal professional life

- **Optimize meaning in work**
  - Flow
  - Choose/limit type of practice
Reflection On Professional Values…

- Why did I choose to become a physician?
- Why did I choose my specialty?
- What motivates me professionally?
- Do I like least about my work?
- By the end of my career, what 3 things do I hope to have accomplished? (be specific)

Shanafelt JCO 24:4020
Common Themes for Physicians

- Being a:
  - Healer
  - Expert
  - Teacher

- Building successful practice

- Making discoveries
Career “Fit”
Shanafelt, Archives IM 169:990 (2009)

- 465 Internal medicine physicians Mayo Clinic

- Most personally meaningful aspect of work:
  - Patient care 68%
  - Research 19%
  - Education 9%
  - Administration 3%

- Spending <20% effort in most meaningful activity strongly associated with burnout:
  - (53.8% vs. 29.9%; p<0.001)

- Persist MV analysis adjust other factors (OR 2.75; p=0.001)
“Do first things first, and second things not at all.”

- Peter Drucker
What can I Do for Myself?

- **Identify Values**
  - Debunk myth of delayed gratification
  - What matters to you most
  - Balance personal professional life

- **Optimize meaning in work**
  - Flow
  - Choose/limit type of practice

- **Nurture Personal Wellness Activities**
  - Relationships (connect w/ colleagues; personal)
  - Religious/spiritual practice
  - Personal Interests (hobbies)
  - Self-care (exercise, sleep, regular medical care)
Do Such Strategies Work?
Oncologist Well-being Survey

- 396 Medical Oncologists
- 21 states
- Academic & private practice

High overall quality of life 50%

Shanafelt, Oncology 68:23 (2005)
Oncologists’ Wellness Promotion Strategies
Shanafelt, Oncology 68:23 (2005)

Find meaning in my work 71%
Approach/philosophy to dealing with death/EOL care 69%
I protect time away from work with my spouse/family 66%
Discussions with family or significant other 65%
Recreation/hobbies/exercise 59%
<p>| Philosophy stressing balance in my personal and professional life | 47% |
| I nurture the religious/spiritual aspects of myself | 40% |
| I look forward to my retirement | 37% |
| I discuss stressful aspects of work with colleagues | 37% |
| I am involved in research activities | 26% |</p>
<table>
<thead>
<tr>
<th>Life philosophy</th>
<th>High WB</th>
<th>Without High WB</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life philosophy stressing balance in my personal and professional life</td>
<td>60%</td>
<td>33%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Approach/philosophy to dealing with death &amp; end of life care</td>
<td>81%</td>
<td>56%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>I protect time with my spouse &amp; family</td>
<td>75%</td>
<td>56%</td>
<td>0.002</td>
</tr>
<tr>
<td>Recreation/hobbies/exercise</td>
<td>79%</td>
<td>63%</td>
<td>0.005</td>
</tr>
</tbody>
</table>
Mindfulness
Krasner, JAMA 302:1284 (2009)

● 70 primary care physicians volunteered for 12 month CME course providing training in:
  - Mindfulness meditation
  - Self-awareness exercises
  - Narratives about meaning in clinical experiences
  - Appreciative interviews
  - Didactic material

● Measured mindfulness, burnout, pt orientation

● Rapid improvement (<3 months) in burnout and mood disturbance that persisted at 15 months
Influence of Training


- 89% adequately trained to treat oncologic disease
- 56% sufficient training delivering bad news
- 20% adequately trained management skills

BO Increased Oncologists Insufficiently Trained to:
  - Deliver bad news (30% vs. 17%; p=0.004)
  - Management skills (34% vs. 22%; p=0.05)
What can Organizations Do?
DEMO**T**IVATION

Sometimes the Best Solution to Morale Problems Is Just to Fire All of the Unhappy People.

www.despair.com
What can Organizations Do?

- Promote Autonomy
  - Organizational decisions
  - Control over schedule
  - Work environment

- Provide adequate resources (efficiency)
  - Coverage for time off
  - Coordinated secretarial/nursing/admin support

- Be value oriented
  - Promote values medical profession
  - Congruence between values and expectations
What can Organizations Do?

- Minimize work home interference
  - Child care
  - Coverage life events

- Promote work-life balance
  - Adequate time off
  - Limits overtime/call/hospital coverage expectations
  - Seminars/retreats job-life balance
  - Sabbaticals
Does Reducing Physician Distress Benefit the Organization?

St. Paul Insurance Company Conducted 4 studies evaluating effects employee stress on quality of care and malpractice claims:

1. Departments (n=91) with greater stress had more malpractice claims
2. Organizational stress score at 61 hospitals strongly related frequency malpractice claims
3. Employee stress reduction program at 1 hospital reduce medication errors ~50%
4. Case Control study implementing this program at 22 hospitals reduced malpractice claims 70% compared to no reduction control hospitals

Jones J Appl Psych 73:727
What strategies have you neglected that you wish to explore?
Summary

- Distress common among physicians
  - Multiple types

- Distress influences both physician & their practice

- Variety of factors contribute to distress and QOL
  - Tension personal/professional life
  - Work related stressors
  - Errors
  - Mentality delayed gratification

- Well-being is more than the absence of distress

- There are strategies you can use to promote wellness
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M.D. Anderson
Henry Kuerer, M.D.

American College of Surgeons
Thomas Russell, M.D.
Paul Collicott, M.D.
Gerald Bechamps
“Self-love, my liege, is not so vile a sin as self-neglect.”

- Henry V, Act 2, scene 4