The High Cost of Burnout in Healthcare Professionals: Organizational Approaches To Improve Well-being

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

Burnout Among Nurses
- 10,164 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 = 143
  - Nurses without burnout = 11%

Burnout Among Nurses

- Used EE subscale of MBI
- 37% hospital and 47% nursing
- Home based nurses report
- Workload caused them miss
- Important changes pt condition
- Nurse burnout correlated with
- Patient satisfaction hospital level

McHugh Health Affairs 30:262

Burnout by Specialty 2011

Employed Physicians vs. Employed U.S. Population

<table>
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<tr>
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<th>Physicians n=6179</th>
<th>Population n=3442</th>
<th>p</th>
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<tbody>
<tr>
<td>Hrs/Wk (median)</td>
<td>50</td>
<td>40</td>
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<tr>
<td>Burnout*</td>
<td>38%</td>
<td>28%</td>
<td>&lt;0.001</td>
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<tr>
<td>Dissatisfied WLI</td>
<td>40%</td>
<td>23%</td>
<td>&lt;0.001</td>
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Shanafelt, JAMA Int Med 172:1137

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Pooled Multi-variate Analysis
Physicians and Population

- Adjusting for:
  - Age, gender, relationship status, hours worked/week, education
- Factors associated burnout (all p<0.0001):
  - Increasing age (OR: 0.986 each year older)
  - Married (OR vs. single 0.71)
  - Hours worked (OR=1.017 each hour)
- Education:
  - Bachelors degree: OR=0.8
  - Masters degree: OR=0.71
  - Doctorate or non-MD/DO professional degree: OR=0.6
  - MD/DO: OR=1.36


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When does burnout start?

- Matriculating medical students better mental health than college graduates pursuing other fields
  - Lower burnout
  - Less depression
  - Higher QOL (overall, mental, emotional, physical)
- Pattern reversed by 2nd year medical school
- Burnout crescendos during residency
- In practicing physicians, burnout and dissatisfaction WLB peaks mid-career (10-13 years in practice)

Brazeau. Academic Med 89:1520; Dyrbey Mayo Clinic Proc 88:1358

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Why Should We Care?
**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 in 1000 patients.

![Diagram showing nurse burnout and patient outcome](diagram)

Patient:Nurse Ratio

Nurse Burnout ⇔ Patient Outcome


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**Burnout and Mortality Ratios**

- Evaluated burnout in 54 ICU's in Switzerland.
  - Physicians (n=345)
  - Nurses (n=1120)
- Determined mean burnout score each unit and evaluated correlation standardized mortality ratios.
- Multi-variable analysis adjusting for work-load, experience and other factors.
- EE at unit level correlated with standardized mortality ratio (β=0.39; p=0.03)
- Burnout problem for entire team and patients cared for.

Welp. Frontiers Psychology 6:1573
Cutting Professional Effort

- Assess physician burnout and satisfaction Mayo Clinic longitudinally 2011 and 2013 (N=2500)
- Independently monitor changes FTE/payroll records
- Burnout and satisfaction 2011 predicted reduction in FTE over next 24 months
  - On IV analysis, each 1 point increase burnout OR=1.63 (p=0.001)
  - On IV analysis, each 1 point decrease satisfaction OR=1.4 (p=0.03)
- Change burnout and satisfaction 2011 to 2013 predict reduction FTE following 12 months
  - On IV analysis, each 1 point increase burnout OR=1.26 (p<0.01)
  - On IV analysis, each 1 point decrease satisfaction OR=1.67 (p<0.001)

Shanafelt, Mayo Clinic Proceedings 91:422

Turnover and Patient Complaints

- Measured burnout 1145 physicians Cleveland Clinic and assessed:
  - Patient satisfaction CHAPS
  - Unresolved patient complaints
  - Actual turnover/departures ensuing years
- Risk factors for burnout
  - Higher % time devoted to clinical work
  - Higher patient satisfaction with communication
- Outcomes:
  - Turnover doubles among physicians with emotional exhaustion
  - Unresolved patient complaints double three depression/clinical

Windover, JAMA Intern Med 178:856

Interactions Individual and Environment on Quality/Safety

Taufl, Mayo Clinic Proceedings In Press 2018
What are the Causes of Burnout?

Causes of Distress Medical Providers
- ↑ clinical demands
- Decreased autonomy
- ↑ government/reimbursement issues
- Decreased time with patients
- Difficulty balancing personal & professional lives
- Inefficiency and intrusion of EHR
- Isolation

Are physicians at inherent risk?
The "Physician Personality"

TRIAD OF COMPULSIVENESS

Doubt

Exaggerated Sense Responsibility

Gabbard JAMA 254:2926

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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

Physicians & Population

Burnout Satisfaction Work-life Balance

Shanafelt, Mayo Clinic Proceedings 90:1600

The EHR....

- Work day time allocation
  - 37% direct clinical time
  - 43% EHR and clerical tasks
  - 13% other (meetings, business work, personal)
- Of time in exam room
  - 53% on history, exam, education patient
  - 37% EHR and desk work
  - 9% admin
- During work day:
  - 2 hrs EHR/Clerical work for every 1 hr clinical work
- On average, 1-2 additional hours on EHR and clerical work during personal time each night

Smily, Annals Internal Medicine 165:753
Rapidly Changing Environment

- Growth medical knowledge
- Productivity expectations (RVU, visits)
- Quality metrics
- Patient satisfaction
- MOC & CME

Staffing and Burnout in Primary Care

- Survey MD, NP/PA, RN, LPN, clerical assistants (n=4010)
- Assessed
  - Panel size (within or over capacity)
  - Panel co-morbidity
  - After hours work (M-F, weekend)
  - Team currently at full staff (1 provider, 1 RN, 1 LPN, 1 CA)
  - Turnover on team last 12 mo
- Symptoms of burnout:
  - MD 49%
  - RN 43%
  - LPN 32%
  - CA 36%

Heffich, JGIM 32:760

Staffing and Burnout in Primary Care

- Largest differences burnout
  - Fully staffed vs not
  - Panel over capacity vs not
  - Turnover any member of team last year
  - HSO burnout for all occupations

Cumulative

Heffich, JGIM 32:760
Its not one problem...

Contributing Factors

Shareaft, Academic Medicine: In press 2018
Differences by Occupation

Differences by Specialty

What is Well-being?
Components of Happiness

- Pleasure (positive emotions)
  - Eating ice cream; having a massage
- Engagement (being absorbed)
  - Training marathon
- Meaning (serving something larger than self)
  - Knowledge, goodness, family, community, justice


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Components of Happiness

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

The full life


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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

What can individuals do?

Do Physicians Accurately Calibrate Their Distress/Well-being?

- 1150 surgeons surveyed 2013
- Subjective assessment of well-being poor
- Completed physician well-being index
What can I Do for Myself?

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

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)

Shanafelt T Clin Onc 24:4020; Lieff Academic Medicine 84:1383
Professional Values...

- Why did I choose to become a physician?
- Why did I choose to specialize in xxxxx?
- 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 J Clin Onc 24:4020; Lieff Academic Medicine 84:1383

Common Themes

- Being a:
  - Healer
  - Expert
  - Teacher
- Building successful practice
- Making discoveries

Horowitz Annals Int Med 138:772; Schrijver Peer J 4:e1783

Integrating Values

- Recognize that time, talents, energy are limited resources
- Determine which personal & professional goals most important to you
- Be honest where goals may be incompatible
- Determine how to integrate based on values
- There is no "right" formula...
How Well Do Physicians Integrate Personal & Professional Lives?

- Residents report "Survival Attitude": life on hold until the completion of residency
- 37% physicians report "Looking forward to retirement": an essential "wellness promotion strategy"
- Many physicians may maintain strategy of delayed gratification throughout their entire career


What can I Do for Myself?

- Identify Values
  - What matters to you most?
  - Balance personal professional life
  - Debunk myth of delayed gratification
- Optimize meaning in work
  - Flow
  - Choose/limit type of practice
  - Environment

Career “Fit”

- 465 Internal medicine physicians Mayo Clinic
- Most personally meaningful aspect of work:
- Spending <20% effort in most meaningful activity strongly associated with burnout:
  - OR 2.25 (p=0.001)
- Persist MV analysis adjust other factors (OR 2.75:
p=0.001)

What is your 20%?

- Can you articulate it?
- Be granular
- I like taking care of
  - patients
  - patients specific disease
  - patients certain demographic
  - mentorship
  - teaching (which tasks)
  - leadership (which tasks)
  - clinical trials

"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
  - Environment
- Nurture Personal Wellness Activities
  - Relationships (connect with colleagues; personal)
  - Religious/spiritual practice
  - Personal Interests (hobbies)
  - Self-care (exercise, sleep, regular medical care)
10 Keys to Resilience

Optimism: belief in brighter future
Facing fear: adaptive response
Moral compass/ethics/altruism
Religion & spirituality: drawing on faith
Social support
Resilient role models
Training: physical fitness
Brain fitness: challenge your mind & heart
Cognitive and emotional flexibility
Meaning, purpose, growth


Enhancing Self-Awareness

- Mindfulness
  - intentional awareness to the moment (being present)
  - conscious attention to thoughts, emotions, biases, values
  - moment to moment self-monitoring

- Narrative medicine
  - A focus on experience of illness not just biologic processes
  - Patient story at center encounter
  - Recognizing your role in the story
  - Validate patient
  - Self-reflection and meaning for physician

Epstein JAMA 282:833; Chacon JAMA 286:1897
What Can Organizations Do?

Stanford Model

Driver Dimensions

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Solutions: Where to Focus

Organizational Strategies to Reduce Burnout & Promote Engagement

- Acknowledge & Assess the Problem
- Harness the Power of Leadership
- Targeted Interventions to Improve Efficiency
- Cultivate Community at Work
- Rewards and Incentives
- Value Alignment and Culture
- Promote Flexibility & Work-life Integration
- Resources to Promote Resilience and Self-care
- Organizational Science

Harness the Power of Leadership
Power of Leadership

- Behaviors physician supervisor large impact burnout & satisfaction individual physicians
  - Each 1 point leader score ~9% burnout (p<0.001)
  - Each 1 point leader score ~9% satisfaction (p<0.001)
- Leadership qualities physician supervisor impacts burnout & satisfaction work-unit level
  - 11% variation burnout between units correlated leader score
  - 47% variation satisfaction between units correlated leader score
- Better training and support for leaders needed

Shanafelt, Mayo Clinic Proceedings 90:432

What Were Key Leadership Behaviors?

- Four key behaviors:
  - Keep informed
  - Humble inquire: asks suggestions how improve work unit
  - Facilitates career development
  - Recognizes job well done
- How demonstrate? 1-3
  - Annual review
  - Leadership Walkrounds
  - Structure, format, content of department meetings

1 Frankel Health Serv Res 43:2050; 2 Thomas BMC Health Serv Res 5:28
3 Shanafelt Am J Med Qual 52:503

Acknowledge & Assess the Problem

Targeted Interventions to Improve Efficiency
Voice: Collaborative Action Planning

- Assessment to identify high opportunity work-units
- Use drivers as framework for discussion
- Listen
  - Which driver dimension currently is issue our unit?
  - What, under our control, could we change to improve?
- Identify, develop, operationalize 1 change
- Assess
  - Did it work?
- Repeat
  - Tangible and incremental improvements

Swensen, Journal Health Care Management 61:105

Voice: Collaborative Action Planning

- When you've seen one unit you've seen one unit
  - "The system can ask the question but the answer is local."
- It works
  - All units decrease burnout (median absolute decrease 11%)
  - 70% units improve satisfaction (median absolute improve 8%)
- Breeds engagement
  - Physicians and leaders working together constructively
  - Change is possible
  - Physician as partner rather than victim
  - Empowered
  - "It was our idea"

Swensen, Journal Health Care Management 61:105

Rewards and Incentives
Productivity-Based Pay

- How you are compensated influences risk of burnout

U.S. Oncologists (n=1015)

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<th>Compensation Type</th>
<th>Burnout</th>
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<tr>
<td>Salary only</td>
<td>41%</td>
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<tr>
<td>Salary plus productivity</td>
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<td>productivity based pay</td>
<td>54%</td>
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U.S. surgeons (n=7905) productivity based pay 80 37% multi-variate analysis

Shanafelt, JCO 32:678; Shanafelt, Ann Surg 250:46

Cultivate Community at Work

Fostering Community and Support From Colleagues

- Randomized controlled trial Mayo Clinic physicians
  - Arm A (Group): n=37
    - Meet 60 minutes every other wk for 9 months
    - Facilitated curriculum small group colleagues
    - Cognitive knowledge, shared experience, solutions
  - Arm B (Admin Time): n=37
    - Receive 60 minutes every other wk for 9 months professional/administrative tasks (~1% FTE)
  - Non-trial: n=478
- Measure meaning in work, satisfaction, well-being

West JAMA Internal Medicine 174:527
2011 Mayo Clinic Intervention Trial

Volunteers
N=74

DOM faculty
N=550

Non-volunteers
N=476

Intervention
N=37

Control
N=37

Current Practice

Outcomes

Burnout

Meaning in work

p=0.002

p=0.006

Iteration 2

- Sign up group 6-7 colleagues
- Dinner together every 2 weeks
- Sent 5 questions
  - Choose 1 to discuss for 15 minutes
  - Avoid devolving to gripe session
  - Engage topic related physicianhood not discussed day to day
- Enjoy each other's company
- Similar benefits burnout and meaning
  - Now standard benefit physicians and scientists

West JGIM 3:589 (2015)
Does it work?

Systematic Review: Interventions to reduce burnout

- Systematic review identified 37 studies
  - 37 cohort
  - 15 randomized controlled trials
- Interventions work
- Individual and system interventions complementary
- We need to do both

West, Lancet 188:2272; Panagbeci, JAMA Internal Medicine 177:195

Physician Burnout: Mayo Clinic Experience

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<td></td>
<td>2011</td>
<td>2013</td>
<td>2015</td>
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<tr>
<td>Emotional exhaustion</td>
<td>22%</td>
<td>39%</td>
<td>32%</td>
<td>30%</td>
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<td>Depersonalization</td>
<td>8%</td>
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<td>12%</td>
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<tr>
<td>Overall burnout</td>
<td>24%</td>
<td>40%</td>
<td>33%</td>
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<th>2014</th>
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<tr>
<td>Emotional exhaustion</td>
<td>32%</td>
<td>43%</td>
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<tr>
<td>Depersonalization</td>
<td>19%</td>
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<tr>
<td>Burnout</td>
<td>38%</td>
<td>49%</td>
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Sharefet, Mayo Clinic Proceedings 90:129