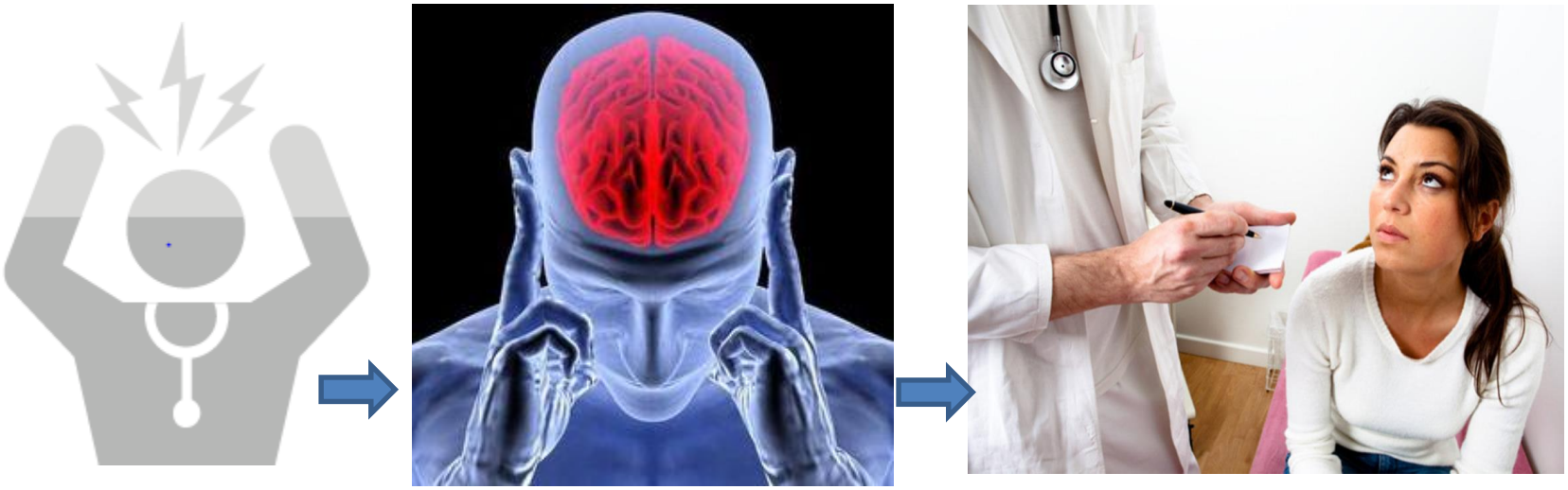
Physician Burnout as a Personal and Public Health Issue

The Need to Reassess Best Use of Resources



Michael R. Privitera MD, MS

Professor of Psychiatry
Director, Medical Faculty and Clinician Wellness Program
University of Rochester Medical Center
Chair, MSSNY Task Force on Physician Stress and Burnout.
Michael_Privitera@urmc.rochester.edu

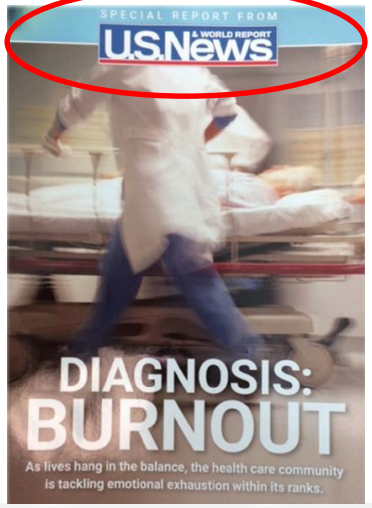
Becker's Hospital Review Conference
April 18, 2017

The New York Times

DOCTOR AND PATIENT

The Widespread Problem of Doctor Burnout

By PAULINE W. CHEN, M.D. AUGUST 23, 2012 3:50 PM 382



TIME

EXPERIENCE THE STORIES BEHIND PERSON OF THE YEAR GO

LATEST MAGAZINE VIDEOS

Doctors Are Burned Out by Busywork: Study

HEALTH MEDICINE

Doctors Are Burned Out by Busywork: Study

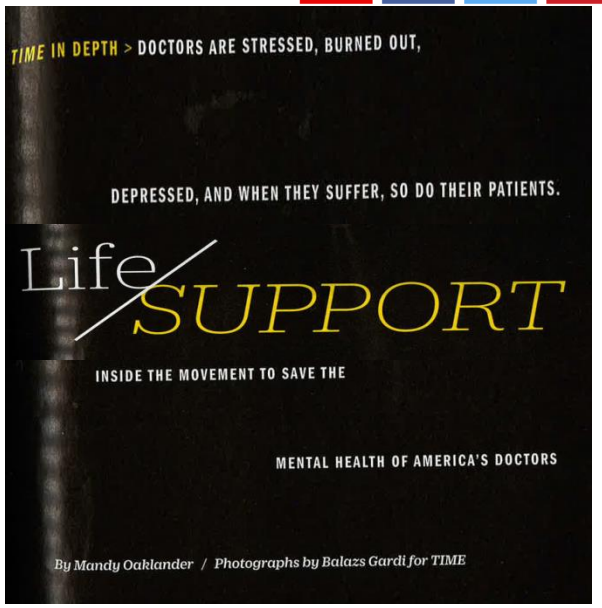
Mandy Oaklander @mandyoaklander June 27, 2016

Forbes

JAN 6, 2016 @ 10:41 AM 16,795 VIEWS 12 Stocks to Buy f

The Story Behind Epidemic Doctor Burnout And Suicide Statistics

Dave Chase, SUBSCRIBER
VC, Speaker, Author, Exec Producer, The Big Heist FULL BIO
Opinions expressed by Forbes Contributors are their own.



Perspectives to be Reconciled

1. **Physician Burnout is the doctors problem**
   a. They need more “grit” and resilience
   b. We need to select better candidates
   c. They just need more mindfulness and yoga

2. **Physician Burnout is physician abuse and the organizations need to do something about it.**

3. **Burnout can’t be a major problem**
   a. Plenty of people still go to medical school
   b. They still show up for work

Burnout and Work Life Balance

2011 → 2014 (MDs vs. Gen Pop)

Burnout

Work Life Balance

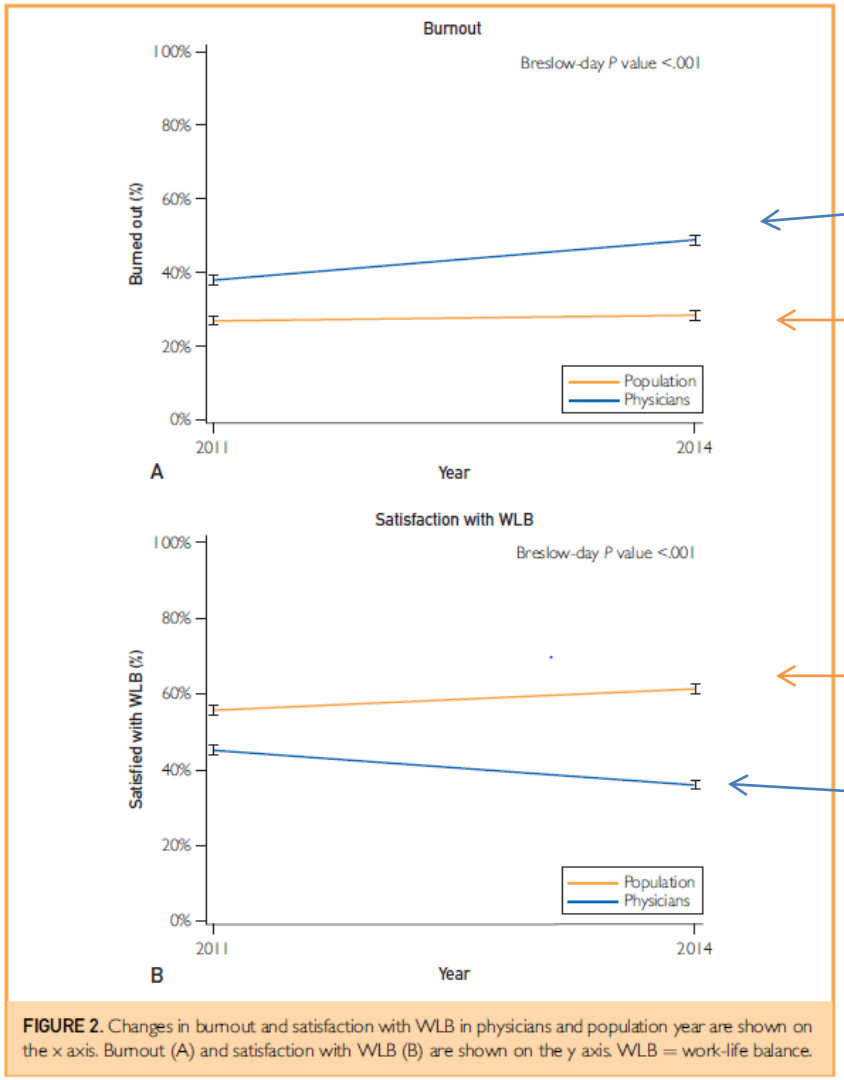


FIGURE 2. Changes in burnout and satisfaction with WLB in physicians and population year are shown on the x axis. Burnout (A) and satisfaction with WLB (B) are shown on the y axis. WLB = work-life balance.

Burnout MDs

Burnout General Population

WLB General Population

WLB MDs

Shanafelt TD, Hasan O, et al. Mayo Clinic Proc. December 2015 90(12) 1600-1613

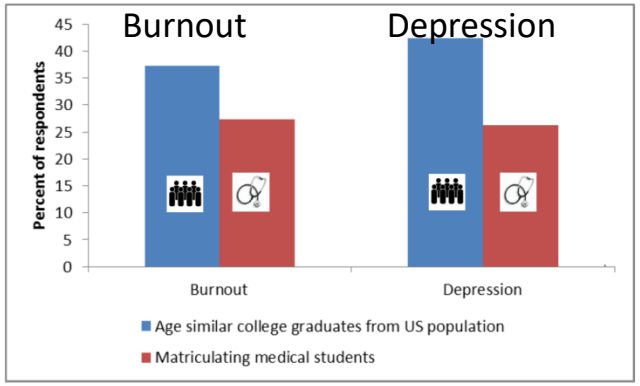
Burnout and Staff-Patient Interaction

Burnout Criteria	Effect on Staff-Patient Interaction
• **Emotional Exhaustion**	• Delay of needed interactions with patient • Less tolerance, irritability • Not much left to give • Decreased Patient Satisfaction
• **Depersonalization/ Callousness**	• Withdrawal from patient • Decreased compassion • Decreased listening to patient • Increased cynicism and sarcasm • Increased risk of patient-on-staff workplace violence
• **Decreased Efficacy** Perception of decreased efficacy becomes reality as burnout becomes worse	• Poor occupational confidence • Think making poor decisions • Later, actually making poor decisions • Cognitive Flexible Memory (CFM) switches to Habit Memory (HM) causes less differential diagnosis and poorer care plan • HM: Reflex responses to stimuli—survival mode • Cognitive impairments of decreased executive function: Decreased attention, focus, situational awareness, long term perspective, ability to anticipate patient and family needs & other patients on unit

Training/Work-Induced
Changes in Resilience & Performance (examples)

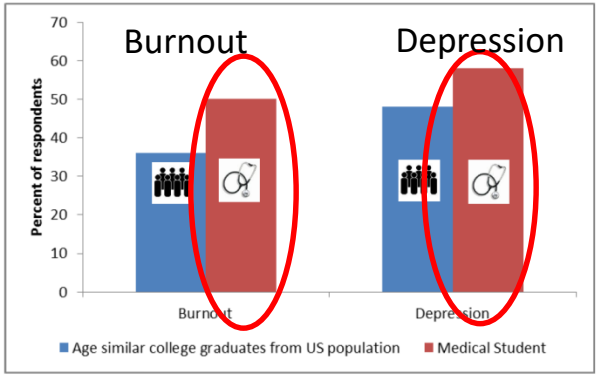
A. Pre-Med → Medical School

Matriculating medical students have lower distress than age-similar college graduates



2012, 7 U.S. medical schools & population sample (slide from Dyrbye)

What happens to distress relative to population after beginning medical school?



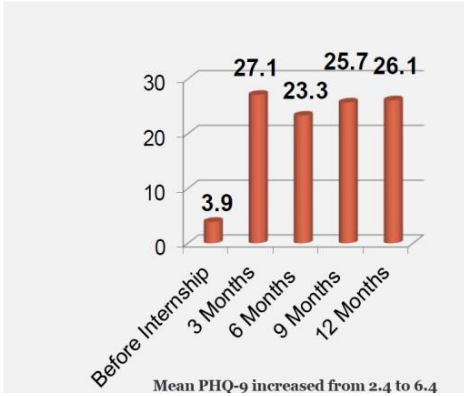
2012, 7 U.S. medical schools & population sample (slide from Dyrbye)

Brazeau et al. Acad Med 2014; 89;1520-5

B. Before Internship → During Internship

Depression During Internship (N=740 interns)

Percentage with "Depression" (PHQ >10)



Internship year	Suicidal Ideation
Before=	2.5%
3 months in=	4.0%
6 months in =	11.1%
9 months in=	9.1%
12 months in=	8.1%

Guille C, et al. JAMA Psychiatry Nov 4, 2015 E1-7

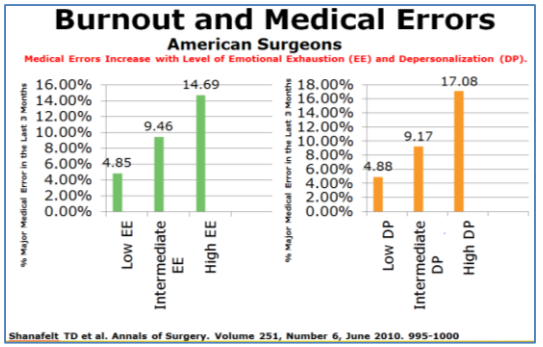
Sen et al. Arch Gen Psych: 2010; 67 (6):557-565

Predictors of Medical Errors

Depression	
Never-depressed	13.6%
Acutely depressed	26.2%
Chronically depressed	32.8%

The Impact of Clinician Burnout is Costly

Multiple Dose-related Relationships



Institutional & Patient Toll:

- Increased **medical errors** and **malpractice claims**
- **Disruptive behavior**
- **Reduced empathy** for patients, **patient satisfaction**,
- Reduced patient **adherence to treatment** regimens.
- Reduced **career satisfaction**

Financial Toll:

- 27% drop in **patient satisfaction scores**
- 40% of **turnover costs** attributed to work stress
- 114% increase of **medical claims by employees**.
- 30% of **short-term and long-term disability** costs.

Personal Toll:

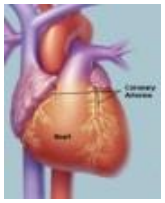
- **Higher Suicide** Rate among physicians- 400/yr.
  Rochester: Three physician suicides 2014-2016.
- **Substance abuse**
- **Divorce**
- **Coronary Heart Disease**:

CHD 1.4 fold up to 1.79 at high burnout levels.

Dysregulated HPA axis
Pro-inflammatory cytokines
Inflammation biomarker
Higher allostatic load

Depression.

54% of our MDs /DOs



Toker S . et al Psychosomatic Medicine 74:840-847)

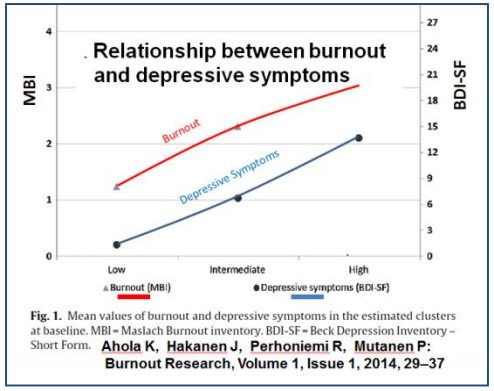


Fig. 1. Mean values of burnout and depressive symptoms in the estimated clusters at baseline. MBI = Maslach Burnout inventory. BDI-SF = Beck Depression Inventory – Short Form. Ahola K, Hakanen J, Perhoniemi R, Mutanen P: Burnout Research, Volume 1, Issue 1, 2014, 29–37

Burnout and Patient Satisfaction

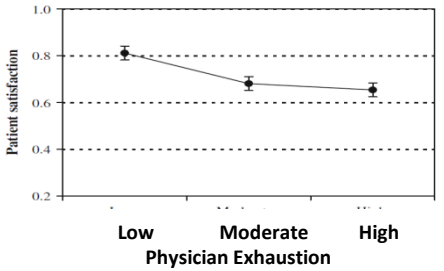
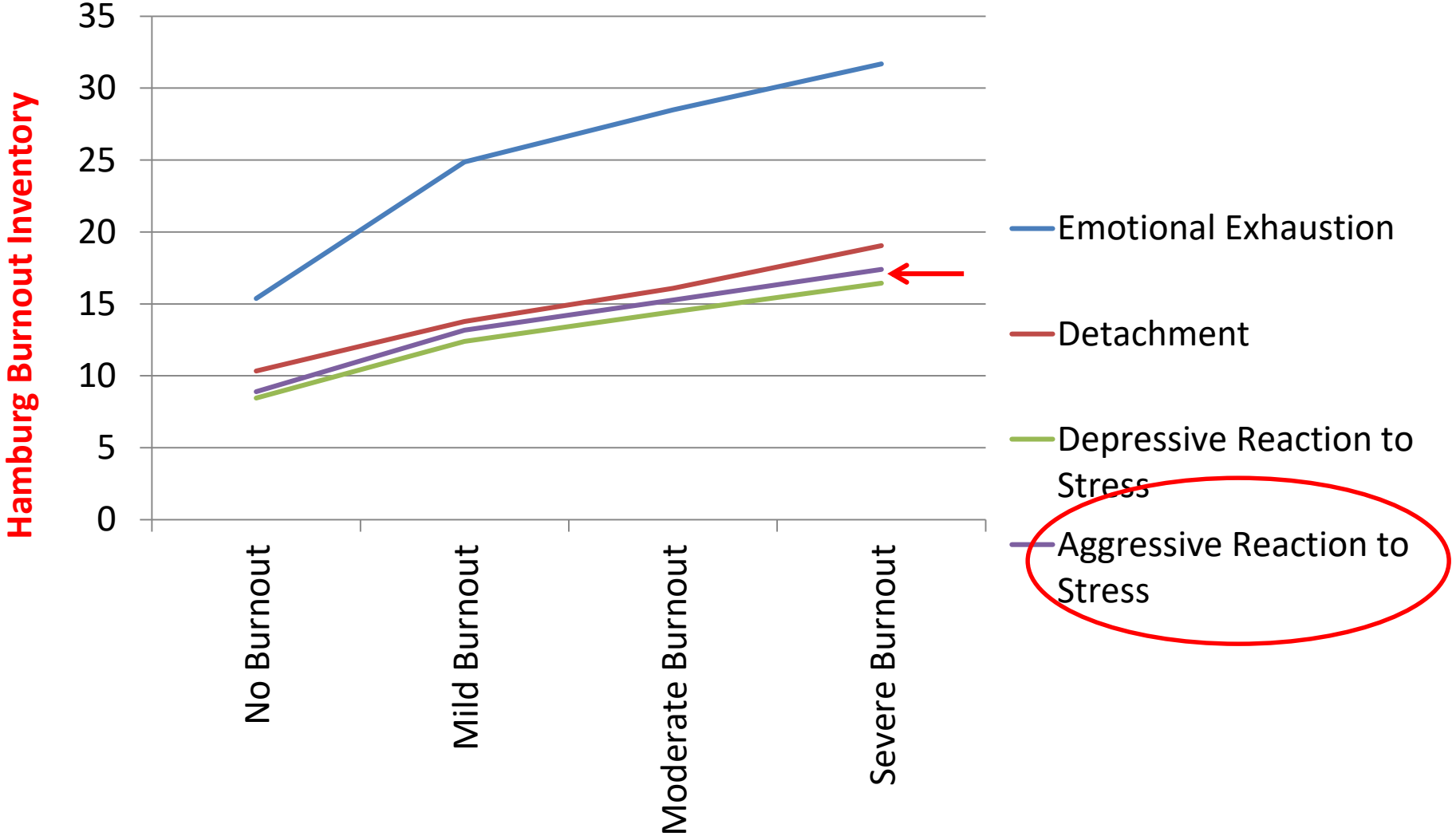


Fig. 1 Average patient satisfaction scores together with their standard errors as a function of physician emotional exhaustion levels

J Clin Psychol Med Settings (2012) 19:401–410

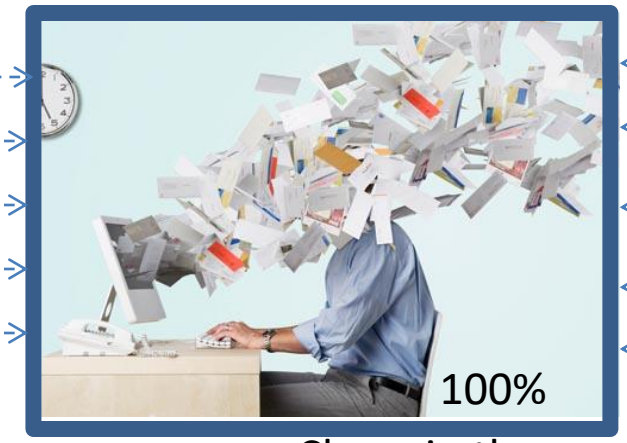
Depressive and Aggressive Reactions to Stress in Burnout (Dose-Related)



Adapted from: Wurm W, Vogel K, Holl A, Ebner C, Bayer D, Mörkl S, et al. (2016) Depression-Burnout Overlap in Physicians. PLoS ONE 11(3): e0149913.doi:10.1371/journal.pone.0149913

National/State decisions

Many “cooks”



Industry/ Local decisions

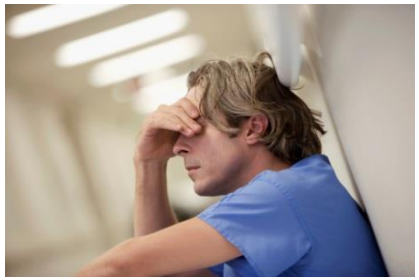
Many “cooks”

Chaos in the work setting

Uncoordinated mandatories

Unharmonized

=> High extraneous co



Internalizer

Externalizer

Over stressed

54 % of MDs have High Burnout

39.8% of MDs have Depression

2-4% of MDs are Disruptive

Organizational Health/ Organizational Ergonomics helps reduce the externally induced chaos

Cognitive Workload Risks

- Cognitive workload is known to be a risk factor to **workers and the people they serve** in such professions as:
  - **Airline pilots**
  - **Air traffic controllers**
  - **Nuclear power workers**.
  - **Simultaneous Translator at UN**

- Yet…… little attention to these risks discussed in the delivery of healthcare by clinicians.

Current Healthcare Ecosystem

Uncoordinated Excessive Cognitive and Emotional Load

Macro Level-

National, state, industry, regulatory

Socio-political Factors, Public Interest Groups, Business of Medicine and Profit Agendas, Bad outcomes: Reactive preventive measures

National opportunity

Reasonable Goal: Achieving excellence in patient care

Well-intended

EMR- not well designed.
Multiple Quality Metrics untested un-harmonized.
Patient Safety Movement silo-ed, uncoordinated
Public demand for increased clinician education as solution.
Patients as primary concern

Not so well-intended

Hassle Factors by Insurance **intended** to wear down provider, cost control methods adapted from auto production. For-profit Agendas. Healthcare as investment vehicle.
Shareholders as primary concern

Reasonable profit margin: Helping growth and sustainability of healthcare company.

Meso Level-

Hospital/Healthcare system-

Malpractice Risk Management

Healthcare Organization

Mitigate or Amplify = ?

Hospital opportunity

Exo Level-

Individual and their family in daily life outside of medicine

Micro Level-

Individual clinician/staff with patients

Being a clinician

Dealing with pain, sickness, death.
Emotion work with stressed patients and families
Delivering bad news

Individual Clinician

External world
"Hidden curriculum" in training
Complaining = whining
Self-effacement- how feel not matter

Internal world:
Personality, altruism, workaholic, perfectionism, obedience
Everyone is evaluating my competence, Don't want them to think I can't handle this .....after all the sacrifice.
=> Loose gauge of how stressed really are !!

Suppression of feeling as cultural norm
Patient always first, Work it out yourself
Buck-up, don't be seen as weak.

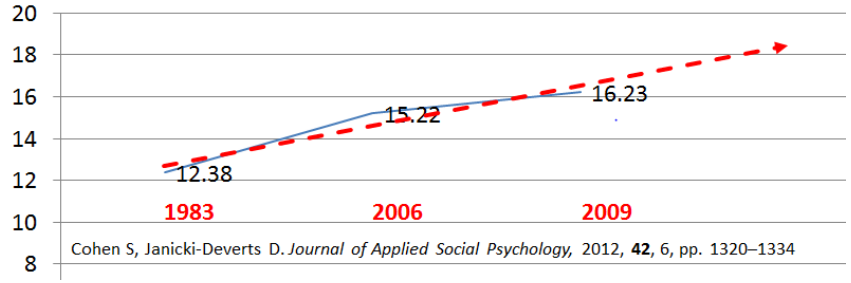
Personal Life

Debt from training
Duties in family
Relationships
Wishes
21 years of education
Self-sacrifice

Perceived Stress Scale.

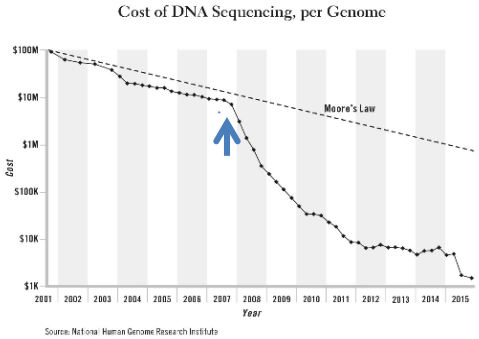
National Sample

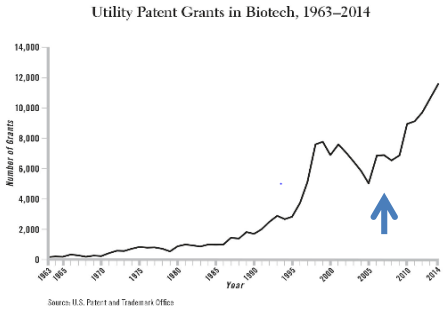
Full Time Employed

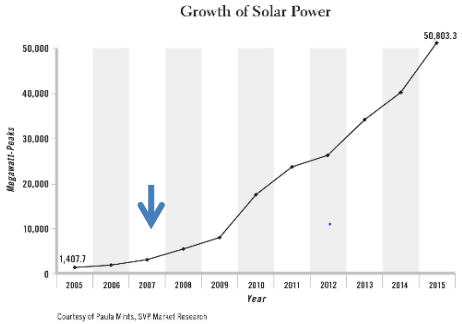


Cohen S, Janicki-Deverts D. *Journal of Applied Social Psychology,* 2012, **42**, 6, pp. 1320–1334

2007 Accelerations in Ability to Collaborate, Create and Connect

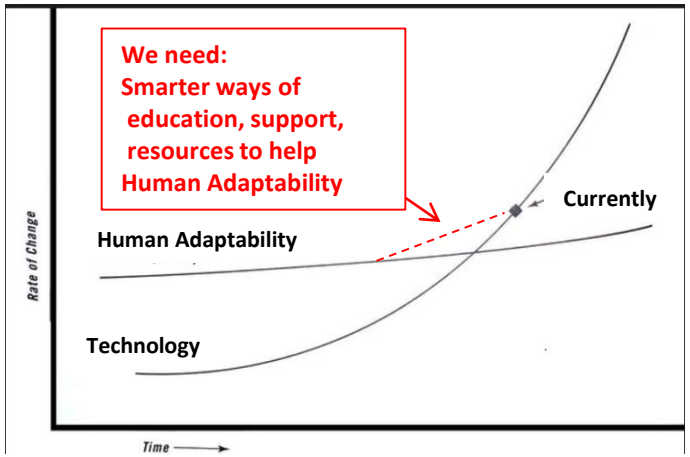






Moore's Law: Computer power of microchips will double every two years, delivering exponential growth of computing power.

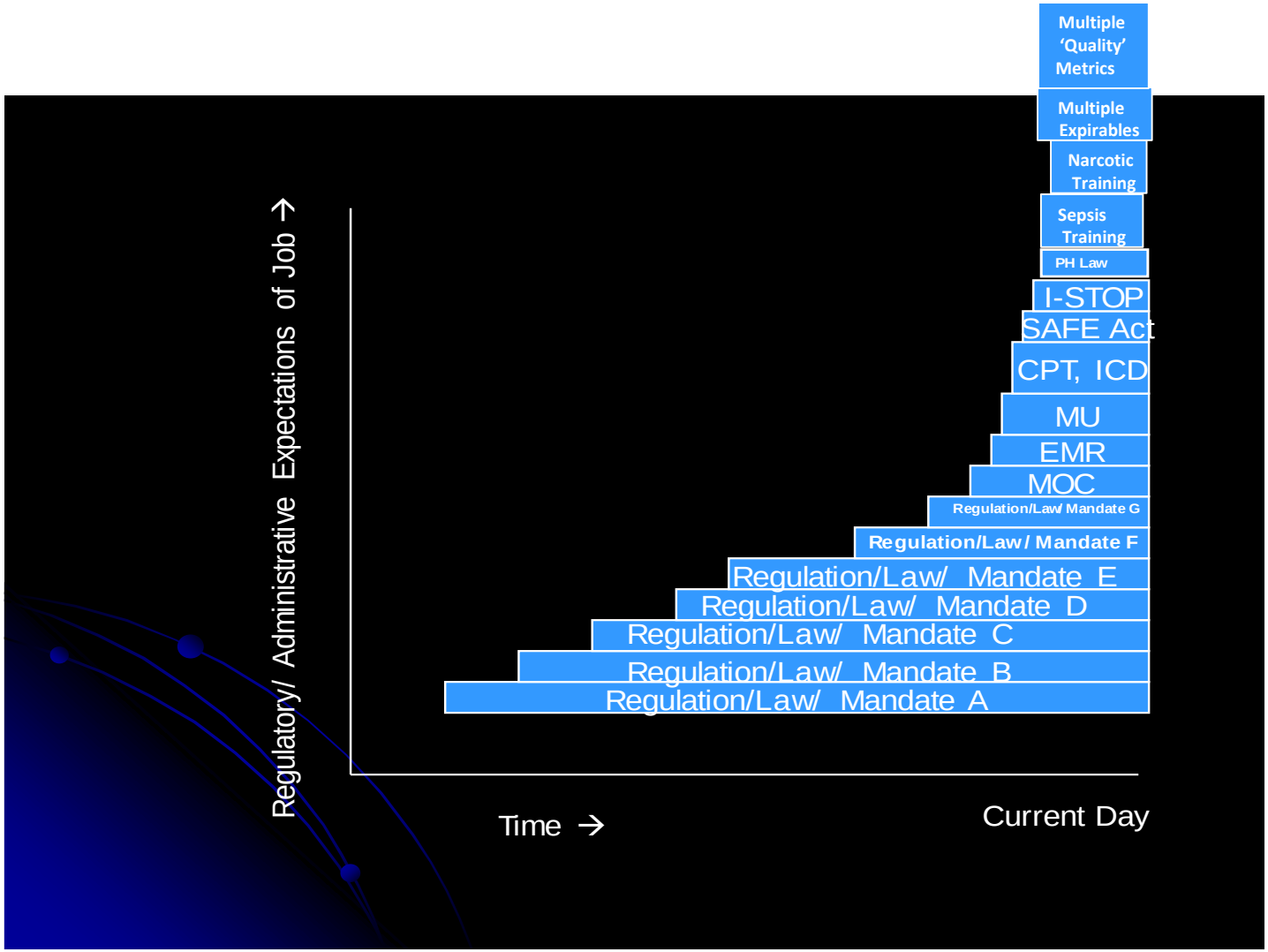
Physical technology ahead of Social Technology, Human Adaptability Impact.



Adapted from Teller E. and Moore G. in Friedman T. Thank you for being Late. Farrar, Straus Giroux Publishers 2016

Accelerated Rate of Administrative Load

- Increasing rate of administrative/regulatory requirements.
- Authoritative sources silo-ed, not harmonized [Federal, State, Industry, Law, Regulatory].
- No resource, time, or support allocation.
- No agency oversees Total Risk/Benefit Ratio, Human Factors in delivery of care.



Six categories of Work Stress that can contribute to Burnout

1. **Excessive workload**-physical, cognitive and emotional
2. **Lack of control**- being able to influence work environment
3. **Poor balance between effort and reward** -material and intangible rewards.
4. **Lack of community**- culture of mutual appreciation and teamwork
5. **Lack of fairness**- resources and justice
6. **Value conflict**- moral distress of having to participate in suboptimal, unethical circumstances.

Maslach C, Leiter MP. The Truth About Burnout: How Organizations Cause Personal Stress and What to Do About It. San Francisco, Calif: Jossey-Bass; 1997.

Self Determination Theory (SDT) and Work Related Outcomes

- Three basic psychological needs of SDT:
  - **Autonomy:** Choice and self-endorsed
  - **Competence:** Effective and masterful
  - **Relatedness:** Mutual connection with and care for important others
- Frustration of these => Higher levels of emotional exhaustion, energy depletion, dysfunction, illness, turnover intention and absenteeism.

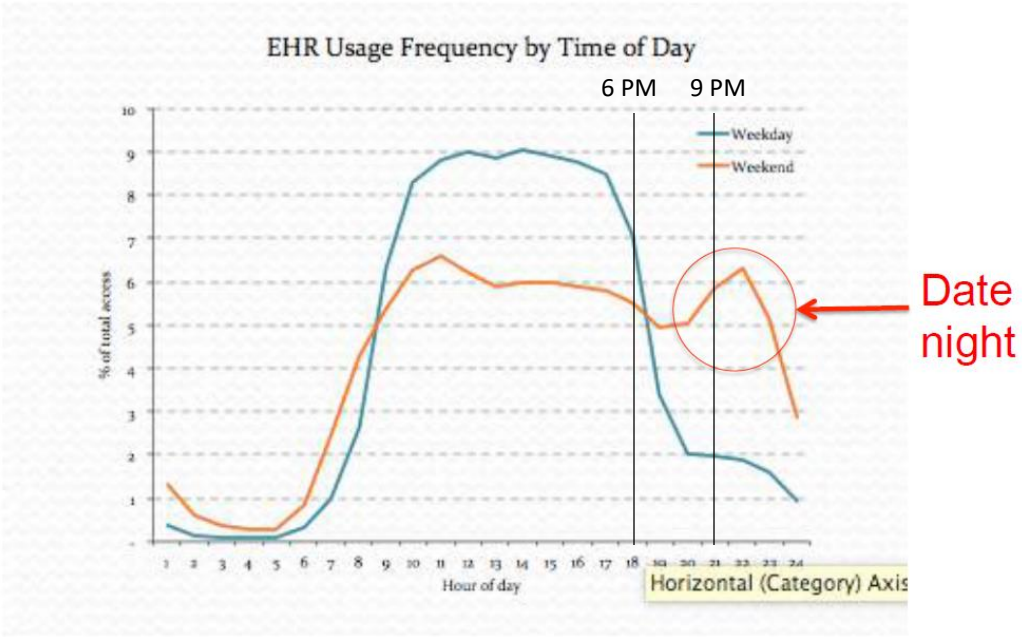
Need dissatisfaction: Passive disregard for basic psychological needs
E.g., not having a voice in organizational decision-making
Need frustration: Active thwarting of these needs.
E.g., being forced to comply with a particular decision that the employee cannot stand behind and endorse

Olafsen AH, Niemiec CP, Halvari H, Deci EL, Williams GC. On the dark side of work: A longitudinal analysis using self-determination theory. European Journal of Work and Organizational Psychology 26 (2): 275-285. 2017

EMR Work Bleeds into Home Life.

- Access to the medical records when at home => has extended the physician work day
- ≥ 10 hours per week on EHR after they go home, on nights and weekends.

"Pajama Time"
Sat nights belong to Epic



Compliments of Christine Sinsky MD, VP for Clinician Satisfaction, American Medical Association, and Brian Arndt, University of Wisconsin.

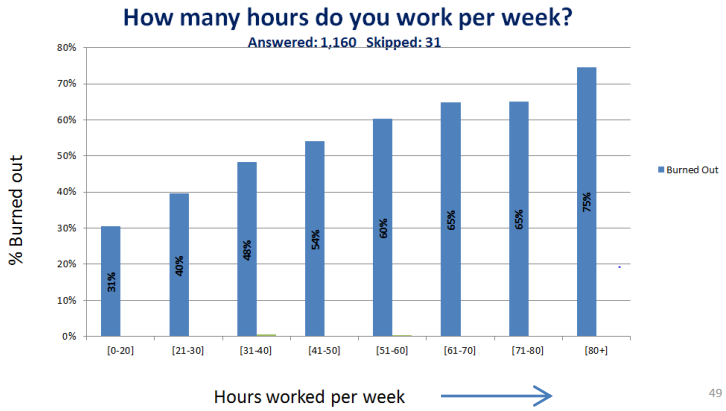
Top 10 Work Related Stressors in Physicians

Answered: 1,178 Skipped: 13

Rank order Stressor	Description	% Responses	# Responses (Total # Respondents = 1183)
1	Length and degree of Documentation Requirements	65.99%	786
2	Extension of Workplace into Home Life (E-mail, completion of records, phone calls)	58.27%	694
3	Prior Authorizations for: Medications/Procedures/Admissions	54.74%	652
4	Dealing with difficult patients	51.89%	618
5	EMR functionality problems	51.05%	608
6	CMS/State/Federal laws and regulations	44.33%	528
7	Lack of voice in being able to decide what good care is	40.39%	481
8	Hospital/ Insurance company imposed Quality Metrics	38.87%	463
9	Dealing with difficult colleagues	31.49%	375
10	Requirement for increased CME/ Maintenance of Certification	31.49%	375

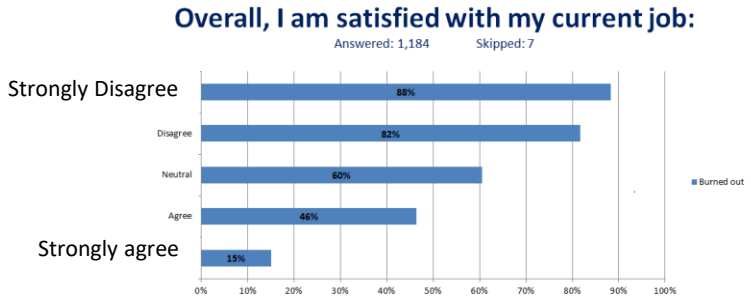
Higher Burnout occurs with:

Higher the **hours worked per week**



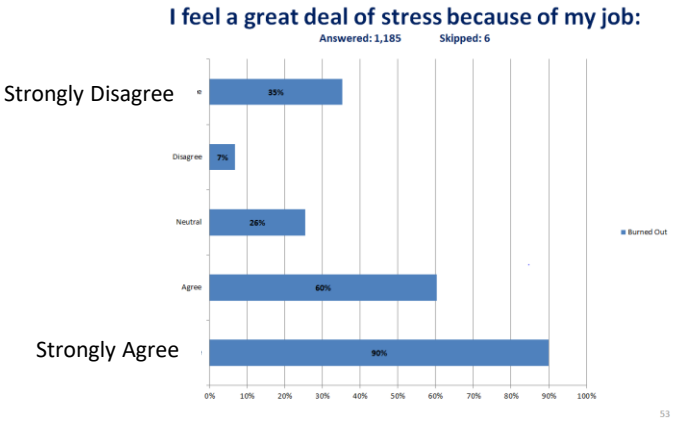
49

Lower the **job satisfaction**



% Burned Out

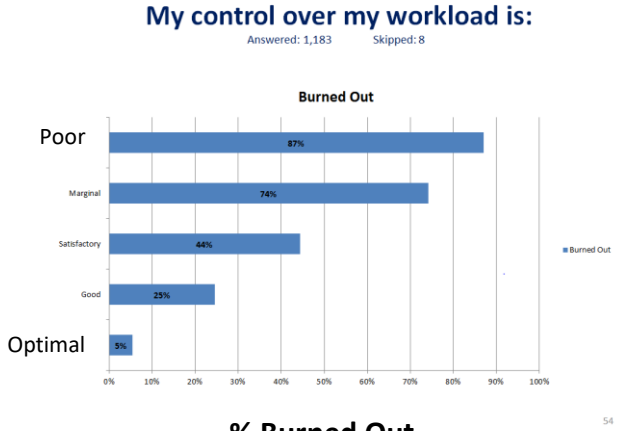
Higher the **stress on the job**



53

% Burned Out

Less control over workload

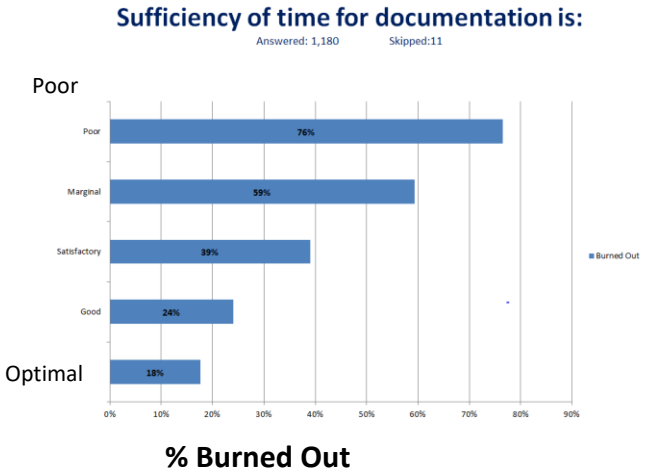


54

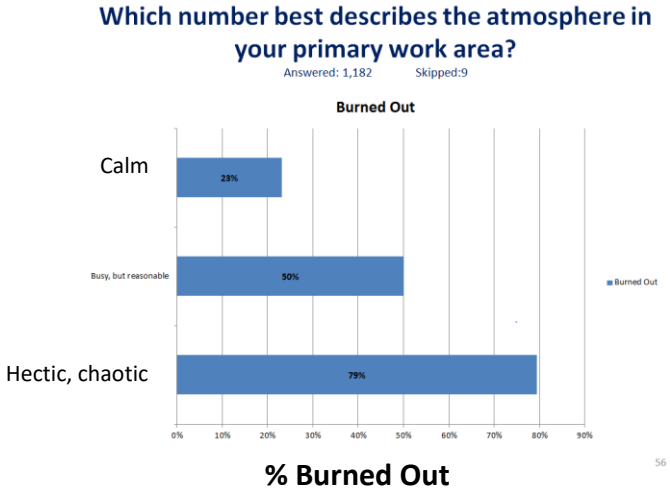
% Burned Out

Higher Burnout occurs with:

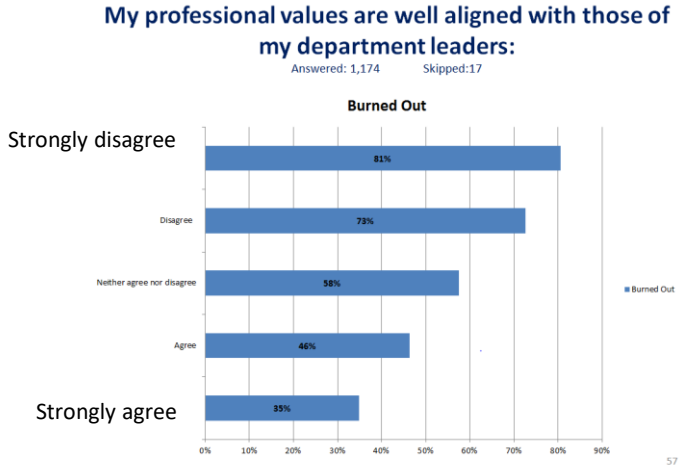
The **less sufficient the time for documentation**



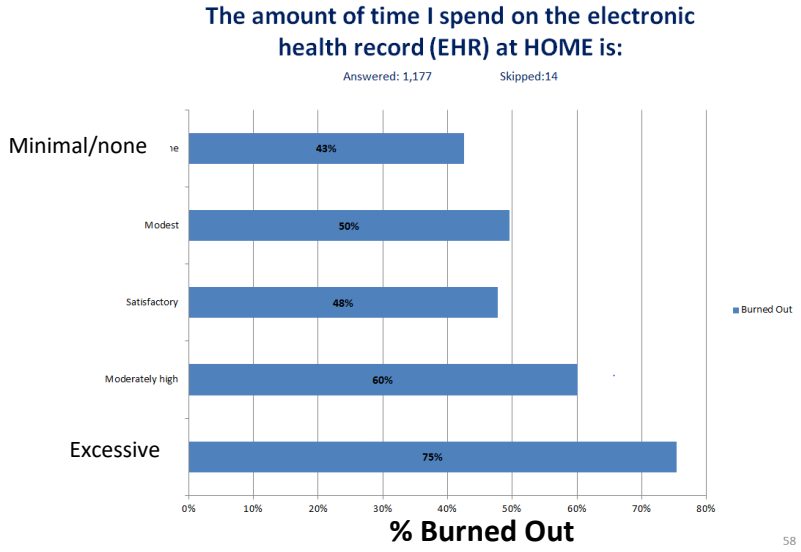
The more **hectic and chaotic** the **atmosphere of primary work area**



The less the alignment of professional values with department leaders



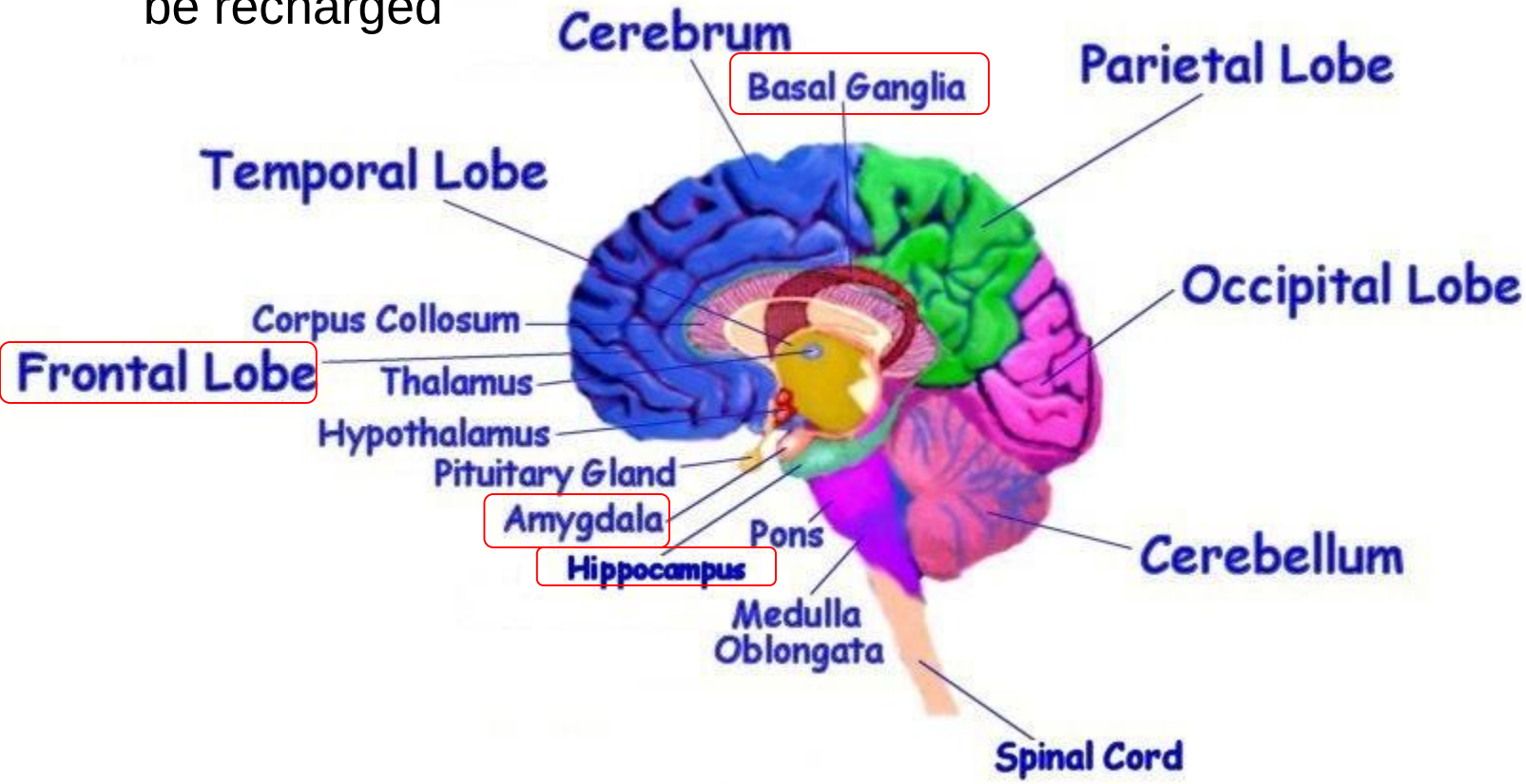
The more excessive the **time spent on EMR at <u>HOME</u>**



Key Structures Human Brain

- **Brain-** <u>neurons</u> are **living cells**. Need primarily <u>glucose and oxygen.</u>

- Brain power = limited **neural resource;** when expend it, needs to be recharged



Executive Functions of the Brain

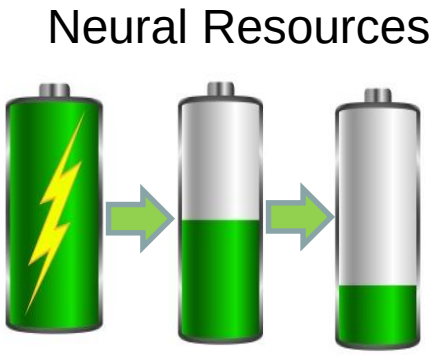
Pre Frontal Cortex

1. **Focus, Attention**
2. **Self Control of Behavior and Speech**
3. **Plan and Organize**
4. **Perspective Taking**
5. **Cognitive Flexibility**
6. **Medical and other Decision Making**
7. **Ability to Defer Gratification**
8. **Estimating Time**
9. **Working Memory**

Attention

Prefrontal cortex

Attention is limited capacity resource used when we:



- **Sort**
- **Sift**
- **Classify**
- **Attention switch** (going between tasks, interruptions)- has high cost of neural resources.

Chronic Stress and Memory

Hippocampus

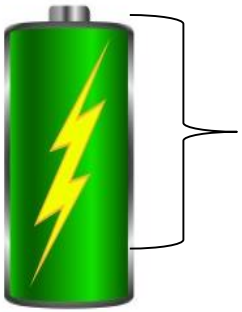
- **Chronic psychosocial stress (4–6weeks): Impairs spatial short-term memory**
  - No significant effect on learning or long-term memory
- **Longer** periods of stress **(>12 weeks): Impairs short-term as well as long-term memory**

Alkadhi K. Brain Physiology and Pathophysiology in Mental Stress
ISRN Physiology Hindawi Publishing Corporation Volume 2013, Article ID 806104,

Cognitive Flexible Memory:

Prefrontal cortex/ Executive function

Requires significant neural resources to function.



1. **Examine and weigh multiple factors**
   - Synthesize **differential diagnosis** from what learned in medical training .
   - More comprehensive and effective **care plan**.
2. **Make the mental connection for planning next steps**
   - The anticipated need: Emotional availability to the patient and family.

Habit Memory:

Striatum and rest of the basal ganglia.

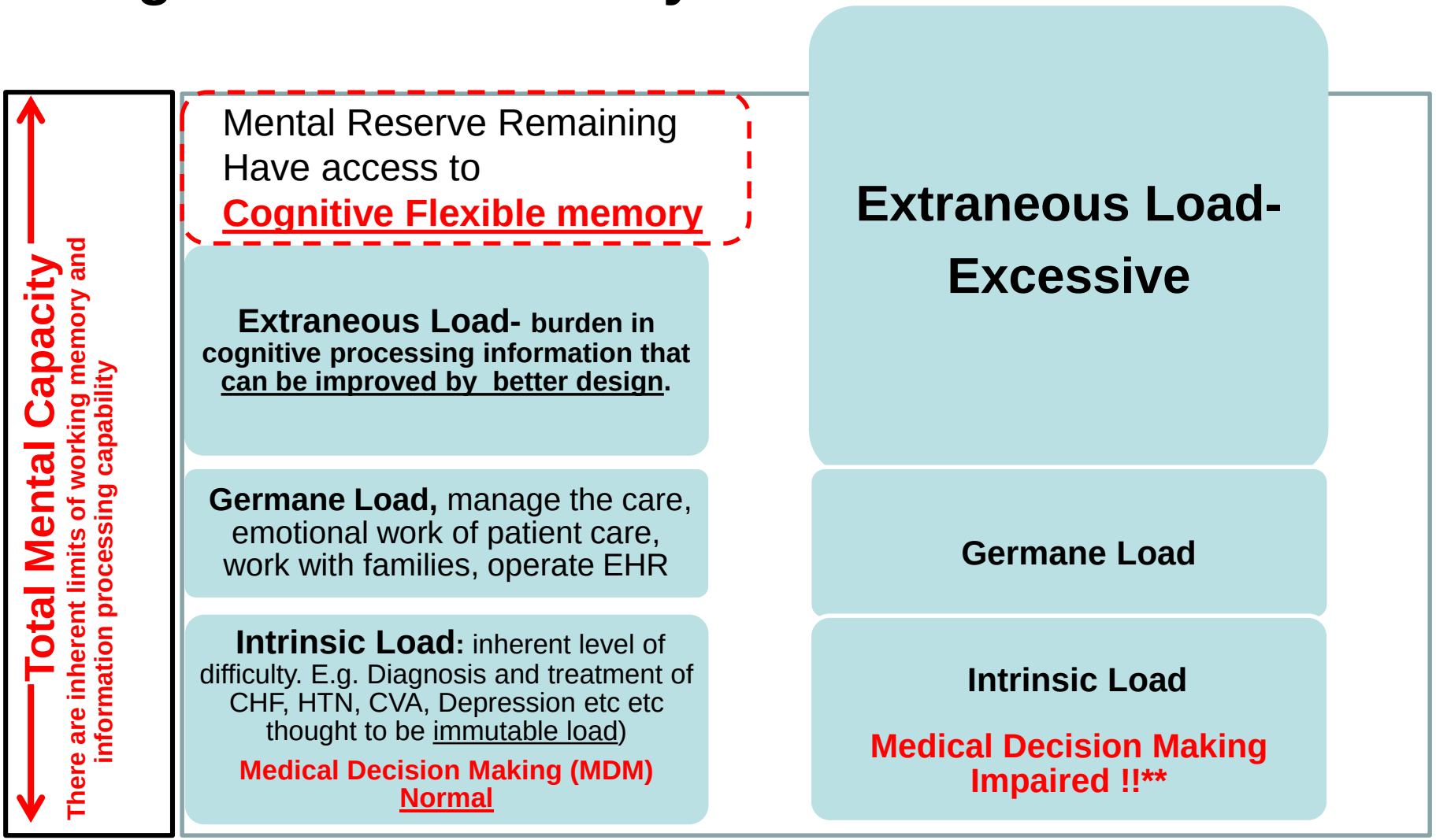
Shift to this function when neural resources low.

- **Spares cognitive resources/less drain**
- **Automates response** to a preceding stimuli
- **Goal Shielding occurs:** Hyper focus to concrete goal, shields out anything else
- Survival mode.

****Leads to non-fund of knowledge errors****

Cognitive Load Theory

Mental overload/ poor decision outcome
Goal shielding-- looses larger context issues
Revert to Habit Memory

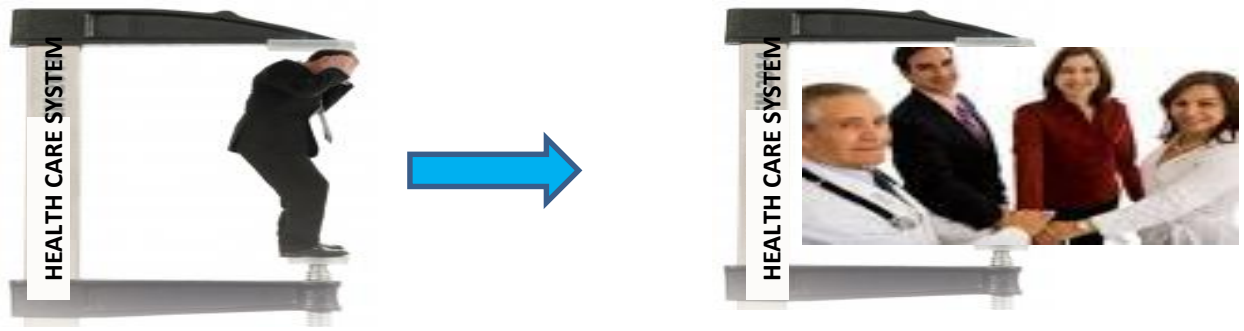


Goal is to reduce extraneous load and promote germane load.

Sweller, J. (1988). "Cognitive load during problem solving: Effects on learning". *Cognitive Science* **12** (2): 257–285..

Ergonomics

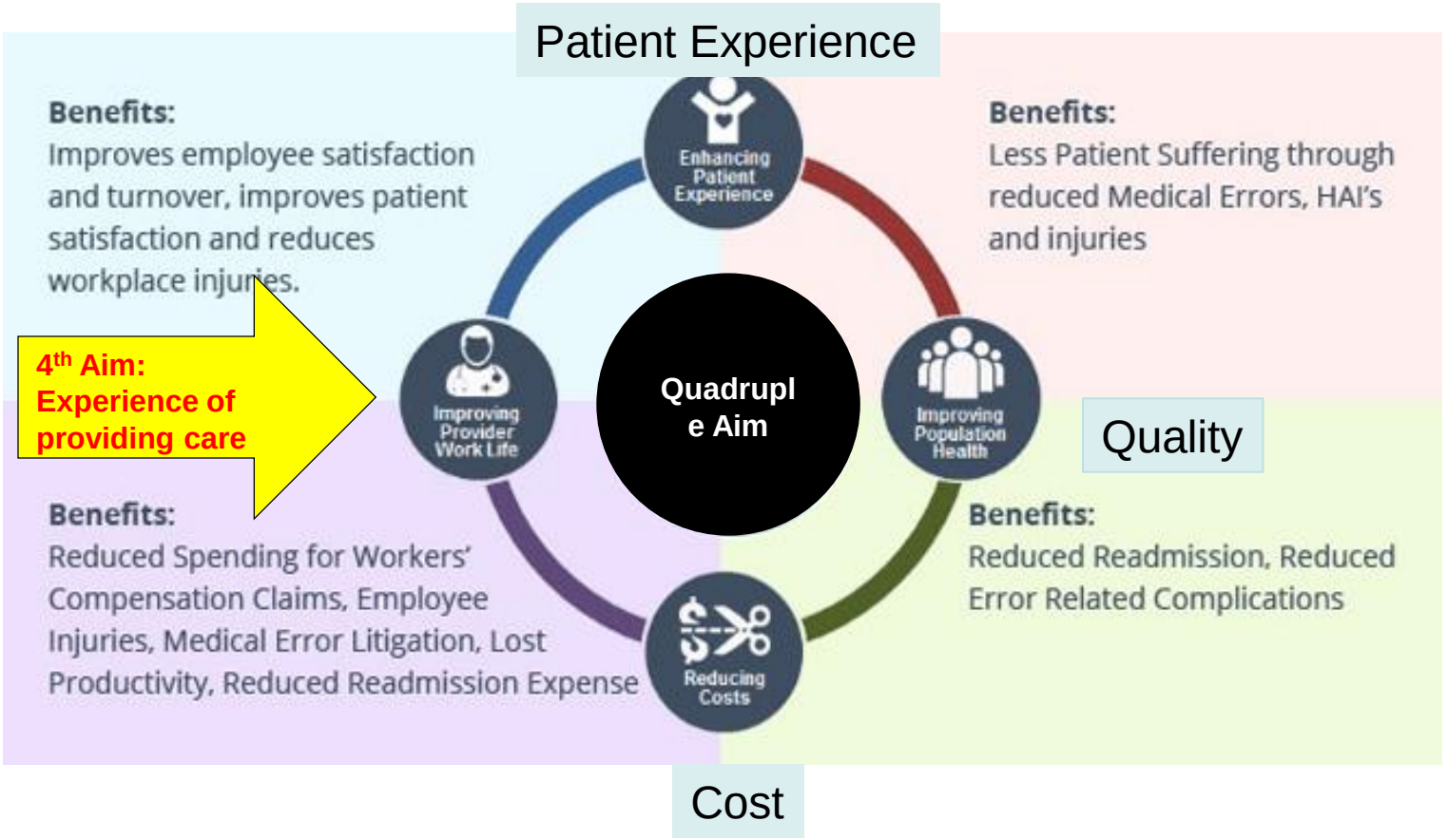
1. **Physical ergonomics-** deals with human body's responses to physical and physiological work loads
   - e.g. vibration, force, repetition, posture.
2. **(Neuro)Cognitive ergonomics-** deals with brain and mental processes and capacities of humans when at work;
   - e.g. mental strain from workload, decision making, human error and training efforts.
3. **Organizational ergonomics-** deals with organizational structures, polices and processes in work environment;
   - e.g. shift work, scheduling, job satisfaction motivation, supervision, teamwork, ethics, best ways of communicating, roll out of new initiatives, etc..



Individual MD Based approach **Hospital & Department-Based approaches**

The Quadruple Aim Framework:

- **4th Aim: Improving the experience of providing care** [1,2,3,4] Healthcare workforce of physicians, nurses and employees finding joy and meaning in their work. [**Human Factors in Care Delivery**]



(1) Sikka R, Morath JM, Leape L. BMJ Qual Saf. 2015. (2) Bodenheimer T, Sinsky C. *Ann Fam Med* 2014.
(3) Free From Harm. Accelerating Patient Safety Improvement. NPSF 2015. (4) 5. AMA: Preventing Physician Burnout 2015:

Barriers to Recognition and Resolution of Organizational Stress and Burnout

1. **Individual perception:** "Hidden curriculum" , culture of endurance, culture of medicine, self-effacement in training. Group think bias: complaining = whining.

2. **Organizational response:** Systemic lack of awareness of **total collective load** on individual clinicians. Silo-ed sources of authority. Confirmation bias: "of course doctors will complain about anything that is new"(missing real signal of distress).

3. **Socio-political perception**. Patient Safety initiatives but without interagency collaboration and harmony. Halo bias- if called "quality" it must be good. (Too numerous, chaotic, unproven "quality" metrics-- not good, harmful).

Privitera, M., Rosenstein, A., Plessow, F., LoCastro, T. "Physician Burnout and Occupational Stress: An Inconvenient Truth with Unintended Consequences" Journal of Hospital Administration Vol.4 No.1 December 2014 p.27-35

Rosenstein A. Privitera M. The Joint Commission, "Physician Leader Monthly" http://www.jointcommission.org/jc_physician_blog/the_impact_of_physician_burnout/

American Hospital Association, "Physician Leadership Forum" http://www.ahaphysicianforum.org/news/index.shtml

Privitera MR, Plessow F, Rosenstein AH. Burnout as a Safety Issue: How Physician Cognitive Workload Impacts Care. National Patient Safety Foundation e-News. *August 24, 2015* http://npsf.site-ym.com/blogpost/1158873/224974/Burnout-as-a-Safety-Issue--How-Physician-Cognitive-Workload-Impacts-Care

Leadership, Burnout and Satisfaction

1. Holds career development conversations with me
2. Inspires me to do my best
3. Empowers me to do my job
4. Is interested in my opinion
5. Encourages employees to suggest ideas for improvement
6. Treats me with respect and dignity
7. Provides helpful feedback and coaching on my performance.
8. Recognizes me for a job well done
9. Keeps me informed about changes taking place at Mayo Clinic
10. Encourages me to develop my talents and skills
11. I would recommend working for your immediate supervisor
12. Overall, how satisfied are you with your immediate supervisor

Favorable Leadership Scores on each of these questions significantly associated with decreased MD Burnout and increased MD Satisfaction each with p< .001 for Burnout and Satisfaction.

Shanafelt TD et al. Mayo Clin Proc. April 2015.

Responsibility Matrix

Physician Responsibility		Administrator Responsibility	
Action	**Comment**	**Action**	**Comment**
Acknowledge Change	New issues, understand their impact, understand how to adapt	**Validate Suffering**	Empathy, validate feelings, recognize impact; you will navigate with them as partners
Own Safety and Quality	Acknowledge variability of care and its impact on outcomes, improve care delivery	**Communicate**	Keep physicians informed and the "why" behind decisions. Is two way street: In addition to sharing information are you listening to what they say?
Promote Accountability and Peer Mentoring	Must hold each other accountable, and be proactive to advance this responsibility	**Help Physicians Understand the Business**	Help educate our physician partners so they better understand the things we do.
Stop Bad Behavior	Have to stop yelling, bullying, lack of follow-up, not responding or outright verbal or physical abuse.	**Be Inclusive**	If you want physician support for key decisions, **include them in the real decision making.**
Practice Humility	Respect the knowledge and skills of our non clinical colleagues.	**Recognize the Need for Symbiosis**	Recognize the need for tandem roles of physicians and administrators for quality of care and maintaining health of the business
Lead By Example	Physicians are looked up to for guidance and advice and people closely follow their actions.	**Beware of Trigger Issues**	Before executing something new, understand the mood of your physicians and the effect the change will have relative to other recent changes and ensure appropriate consultation and communication.

Adapted from Merlino J. August 19, 2015:
http://www.beckershospitalreview.com/hospital-physician-relationships/the-responsibility-matrix-a-strategy-for-stronger-physician-administrator-partnerships.html

Burnout Interventions: Need Both

Individual

- Encourage recognition of Burnout in the face of Medical Culture and "Hidden Curriculum"
- Physicians start off more resilient than general population: **Individual interventions must be paired with organizational interventions**
- Wellness Seminar series as "safe place'
- Avoid blaming the victim
- Normalize self care
- Normalize boundaries between work and home despite technology
- Multiple individual interventions available
  - Mindfulness
  - Resiliency training
  - Gratefulness
  - 3 Good Things
  - Yoga
  - Coaching
  - Employee Assistance- Wellness Division
  - Self Help websites and literature
  - Peer Support
  - Clinician ombudsman to have work/life balance representation
  - Diet, exercise

Organizational

- **Overcome the medical culture of endurance** where staff must deny stress
- **Leadership style and concern is key**
- **Establish: Wellness Initiative Strategic Planning Work Group**
- Include **human factor issues** in healthcare delivery
  - **Neuro-cognitive and organizational ergonomics**
  - **The Quadruple Aim Framework:**
    - Costs, Quality, Patient experience, and **Fourth Aim: Experience of providing care.**
- Attempt to **understand the front line problems:** **Anonymous survey** to learn key pain points for clinicians, **round table discussion** of aggregate findings and **leadership commitment to action**.
- **Encourage stronger administrator/physician partnerships**
- **Use clinician wellness and career satisfaction metrics** and tie these into quality of care, reduction of malpractice, errors, and patient satisfaction.
- Block out time and resources to help **organize completion of all mandatories, regulations**
- No reporting of seeking mental health care on licensure, malpractice carrier, credentialing applications or renewals.
- **Confidentiality** in seeking help

Executive Leadership and Nine Organizational Steps to Promote Engagement and Reduce Burnout (Mayo Model)

Tait D Shanafelt MD and John H. Noseworthy MD, CEO of Mayo Clinic .Mayo Clinic Proc. 2016

Conclusions

1. **Individual and institutional/ organizational interventions for Burnout reduction are effective**

2. **Call for more Organizational and Human Factor/ (Neuro)Cognitive Ergonomic science at national, state, industry and local levels in healthcare.**

3. **Attention to 4th Aim (experience of providing care) of Quadruple Aim framework critical to the success of other 3 aims (cost, quality, patient experience)**

4. **Effective and involved leadership is critical for things to improve**

5. **"Meaningful progress will require collaborative efforts by national bodies, health care organizations, leaders, and individual physicians, as each is responsible for factors that contribute to the problem and must own their part of the solution"[1].**

(1) Tait D. Shanafelt, MD[1]; Lotte N. Dyrbye, MD, MHPE[1]; Colin P. West, MD, PhD Addressing Physician Burnout. The Way Forward *JAMA.* Published online February 9, 2017. doi:10.1001/jama.2017.0076

Michael_Privitera@urmc.rochester.edu