

# Examining Healthcare Burnout through the Lens of Bioethics

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## Objectives

- The definition of burnout in healthcare
- Explore ethically controversial aspects of burnout
- Explore the ethical foundations of healthcare for solutions to
  - Understand the roots of burnout
  - Mitigate burnout

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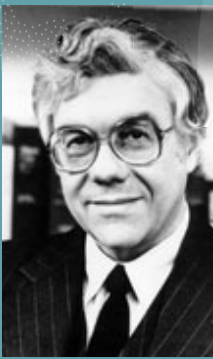
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## History

- Colloquialism
  - Effects of chronic illicit drug use
- American psychologist Herbert Freudenberger - 1974.
- Failure or exhaustion because of excessive demands on energy, strength, or resources.
  - Severe stress and high ideals
  - "Helping professions"
- Focused on the practitioner
  - Did not examine the milieu



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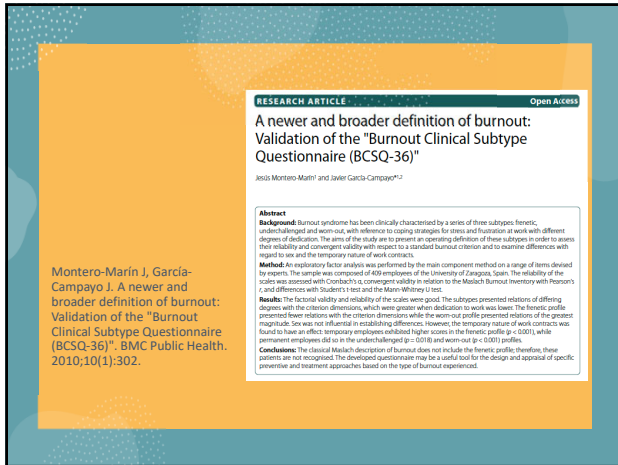
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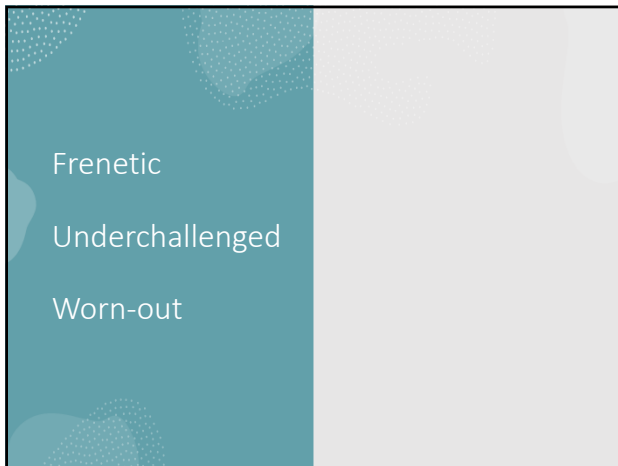
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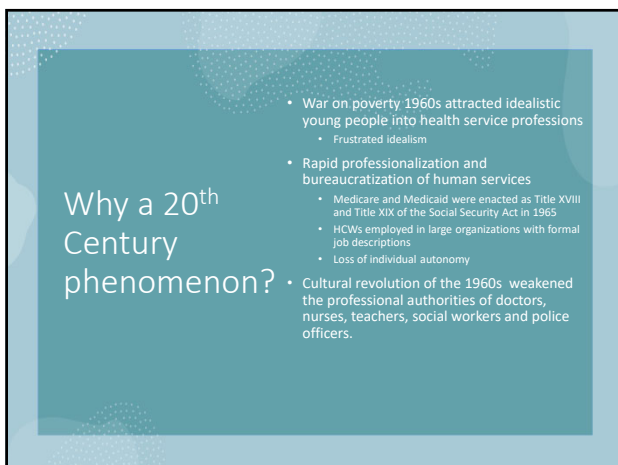
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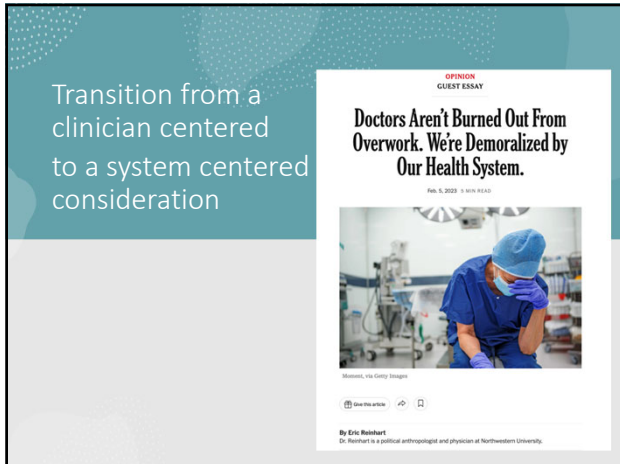
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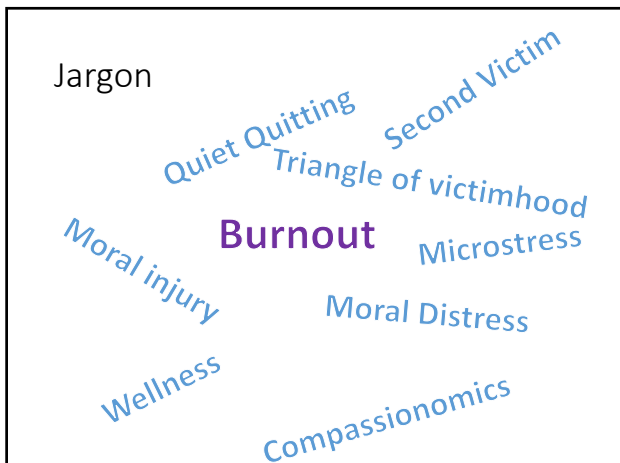
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## The neurobiology of burnout

- The Prefrontal Cortex (PFC) governs high-order reasoning, social cognition, and complex decision-making, including the integration, conceptualization, and critical evaluation of information. It is essential for executive functions such as attentional regulation, planning and organization, and guiding appropriate social behaviors including placing patients' interest above one's own, and maintaining integrity despite challenges.
- Chronic exposure to uncontrollable stress – but not controllable stress - has marked deleterious effects on the PFC
  - Sleep deprivation particularly affects PFC functioning with impairments of physiologic activity correlated with cognitive deficits.
- Chronic occupational exhaustion is related to PFC grey matter atrophy
  - Recoverable with sustained periods of non stress.

Arnsten AFT, Shanafelt T. Physician Distress and Burnout: The Neurobiological Perspective. Mayo Clin Proc. 2021;96(3):763-9.

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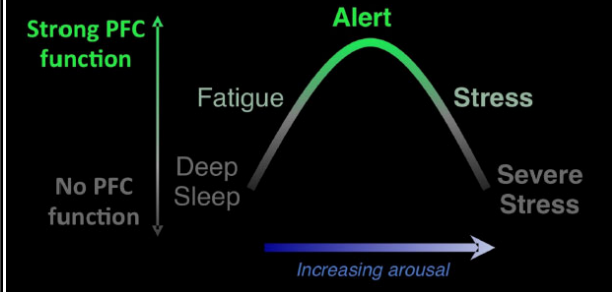
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## The effects of arousal state on PFC function



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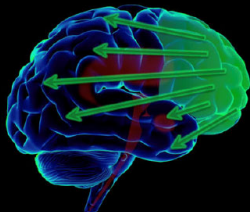
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### A. ALERT Strong PFC Top-Down Control



### B. FATIGUE/STRESS Weak PFC Top-Down Control



### C. RELEVANCE TO MEDICAL PRACTICE

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| <p><b>Examples of PFC dysfunction:</b></p> <ul style="list-style-type: none"> <li>• Forgetful, concrete thinking</li> <li>• Difficulty concentrating, disorganized</li> <li>• Impaired decision-making</li> <li>• Reduced insight, judgement, moral conscience</li> <li>• Decreased empathy and compassion</li> <li>• Decreased optimism and persistence</li> <li>• Decreased self-regulation, inhibitory control</li> </ul> | <p><b>Examples of clinical consequences:</b></p> <ul style="list-style-type: none"> <li>• Potential for medical errors</li> <li>• Harder to manage complex tasks</li> <li>• Sub-optimal care, medical errors</li> <li>• Decreased commitment to professionalism</li> <li>• Impaired communications with patients/co-workers</li> <li>• Cynicism and decreased engagement</li> <li>• Increased likelihood of unprofessional behaviors</li> </ul> |
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**Physicians down-regulate their pain empathy response: An event-related brain potential study**

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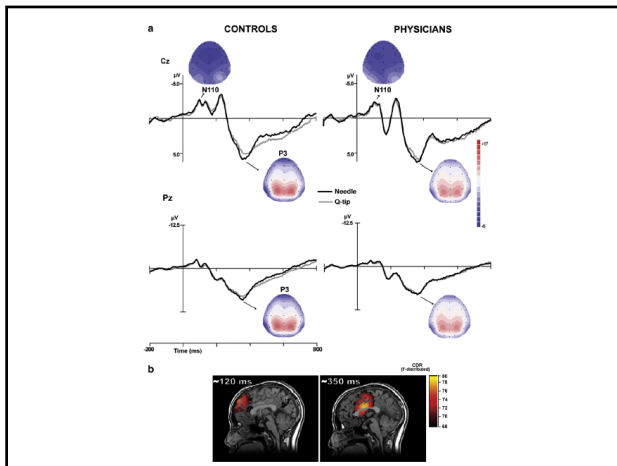
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**ABSTRACT**

Watching or imagining other people experiencing pain activates the central nervous system's pain matrix in the observer. Without emotion regulation skills, repeated exposure to the suffering of others in healthcare professionals may be associated with the adverse consequences of personal distress, burnout and compassion fatigue, which are detrimental to their wellbeing. Here, we recorded event-related potentials (ERP) from physicians and matched controls as they were presented with visual stimuli depicting body parts pricked by a needle (pain) or touched by a Q-tip (no-pain). The results showed early N110 differentiation between pain and no-pain over the frontal area as well as late P3 over the centro-parietal regions were observed in the control participants. In contrast, no such early and late ERP responses were detected in the physicians. Our results indicate that emotion regulation in physicians has very early effects, inhibiting the bottom-up processing of the perception of pain in others. It is suggested that physicians' down-regulation of the pain response dampens their negative arousal in response to the pain of others and thus may have many beneficial consequences including freeing up cognitive resources necessary for being of assistance.

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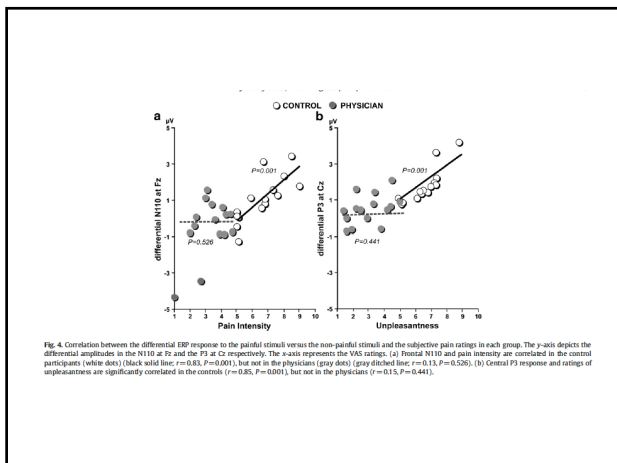
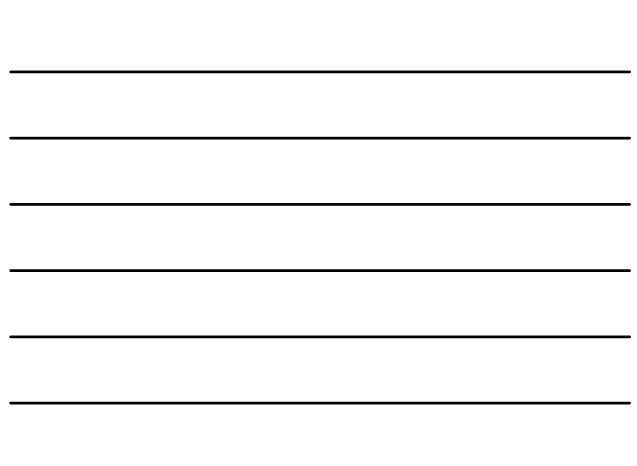
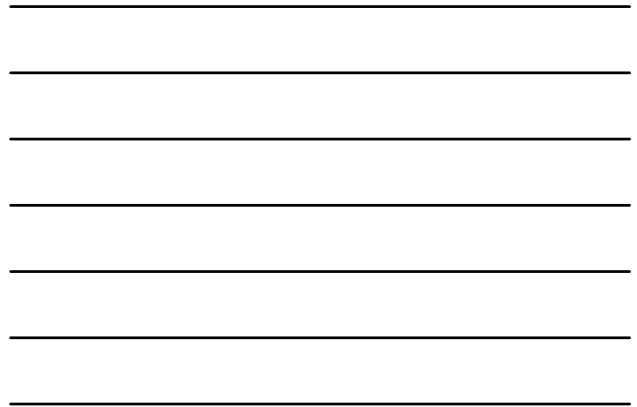


Fig. 4. Correlation between the differential ERP response to the painful stimuli versus the non-painful stimuli and the subjective pain ratings in each group. The y-axis depicts the differential amplitudes in the N110 at Fz and the P3 at Cz respectively. The x-axis represents the VAS ratings. (a) Frontal N110 and pain intensity are correlated in the control participants (white dots) (black solid line:  $r=0.83$ ,  $P=0.001$ ), but not in the physicians (grey dots) (grey dashed line:  $r=0.12$ ,  $P=0.526$ ). (b) Central P3 response and ratings of unpleasantness are significantly correlated in the controls ( $r=0.85$ ,  $P=0.001$ ), but not in the physicians ( $r=0.15$ ,  $P=0.441$ ).

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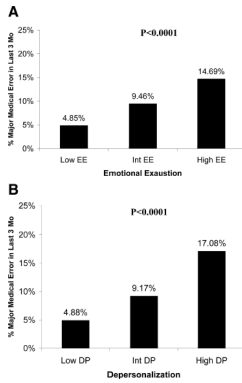


**Table 3. Associations between Malpractice Suit in Last 2 Years and Career Satisfaction**

	Malpractice suit in last 2 years (n = 3,764)	No malpractice suit in last 2 years (n = 5,400)	Odds ratio*	p Value
<b>Burnout</b>				
High EE score,† n (%)	482 (27.5)	1,148 (21.4)	1.39	<0.0001
High DP score,‡ n (%)	332 (19.2)	719 (13.6)	1.51	<0.0001
Burned-out,§ n (%)	561 (31.9)	1,353 (25.2)	1.39	<0.0001
Positive depression screen, n (%)	817 (46.6)	1,981 (36.9)	1.49	<0.0001
Suicidal ideation last year, n (%)	112 (6.4)	215 (4)	1.64	<0.0001
<b>Quality of life</b>				
Overall QOL score, mean	7.2	7.5	—	<0.0001
Mental QOL score, mean	6.9	7.3	—	<0.0001
Physical QOL score, mean	6.7	7.0	—	<0.0001
<b>Career satisfaction, n (%)</b>				
Would become physician again	1,226 (69.6)	4,087 (75.8)	0.73	<0.0001
Would become surgeon again	1,343 (76.2)	4,300 (79.8)	0.82	0.0014
Recommend children pursue career as physician*	863 (55)	2,930 (61.5)	0.81	<0.0001
Recommend children pursue career as surgeon†	695 (44.3)	2,419 (50.8)	0.80	<0.0001

\*Odds ratio >1 indicates increased risk among those with a malpractice suit; odds ratio <1 indicates lower likelihood among those with a recent malpractice suit. †Individuals indicating symptoms of emotional exhaustion weekly or more often have median Emotional Exhaustion (EE) scores on the full Maslach Burnout Inventory (MBI) of >30 and have a >75% probability of having a high EE score as defined by the MBI (≥27). ‡Individuals indicating symptoms of depersonalization weekly or more often have median Depersonalization (DP) scores on the full MBI of >13 and have a >85% probability of having a high DP score as defined by the MBI (≥10). §High score (≥2 weekly) on Emotional Exhaustion and/or Depersonalization scale (see Methods). ¶Only asked of surgeons indicating they have children. QOL, quality of life.

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Shanafelt TD, Balch CM et al. Burnout and medical errors among American surgeons. *Ann Surg.* 2010;251(6):995-1000.

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Fig. 4b. A proportional forest plot of the relationship between surgeon depersonalization and patient safety outcome (k = 4).

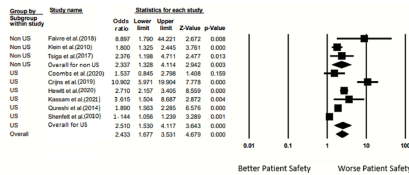


Fig. 5. A sub-group analysis between US and non-US studies.

Al-Ghunaim TA, Johnson J et al. Surgeon burnout, impact on patient safety and professionalism: A systematic review and meta-analysis. *Am J Surg.* 2022;224(1 Pt A):228-38.

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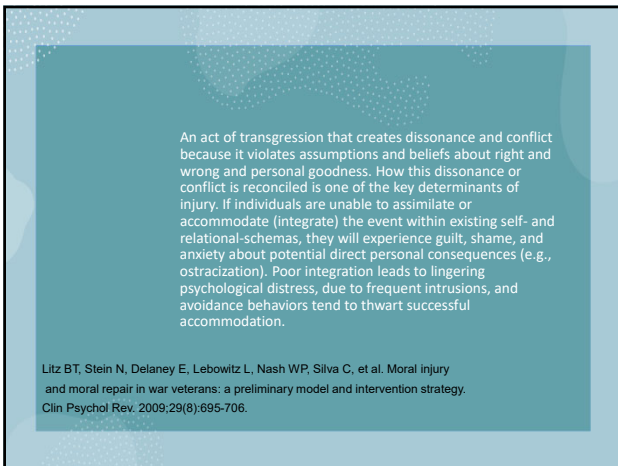
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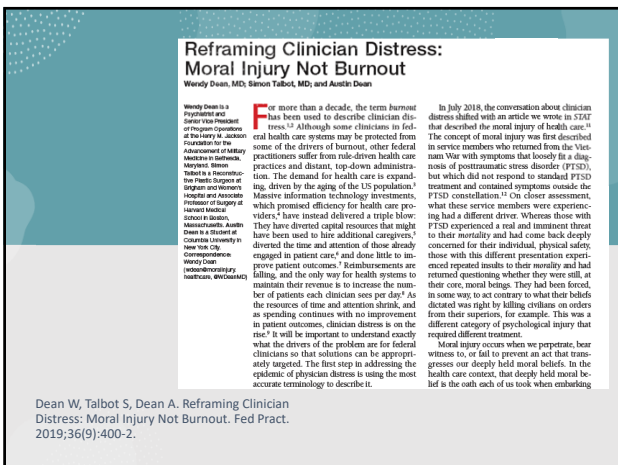
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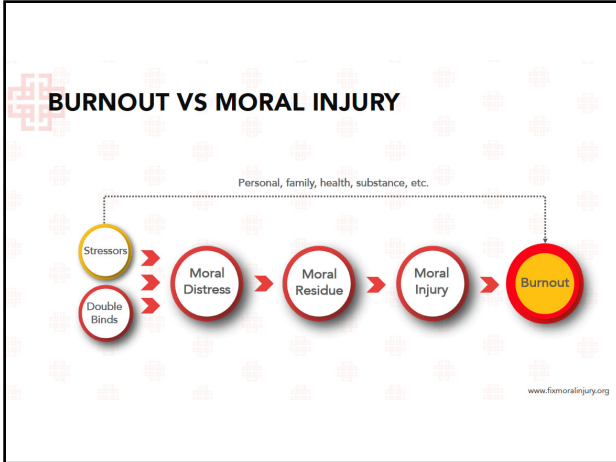
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Professional burnout is the sum-total of hundreds and thousands of tiny betrayals of purpose, each one so minute that it hardly attracts notice.  
Richard Gunderman MD, PhD.

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### Autonomy vs Beneficence Impact upon "Moral Distress"

- Physician feels obliged to provide treatment in a scenario where they feel it is futile
  - Patient being "abandoned to their autonomy"
  - Failure to exercise clinical judgment in selection of treatment based upon beneficence

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### Perceived Nonbeneficial Treatment of Patients, Burnout, and Intention to Leave the Job Among ICU Nurses and Junior and Senior Physicians

Daniel Schwarzkopf, MS<sup>1</sup>; Hendrik Rüddel, MD<sup>1,2</sup>; Daniel G. Thomas-Rüddel, MD<sup>1,3</sup>; Jörg Felle, PhD<sup>4</sup>; Bernhard Pöddinger, MD<sup>1,2</sup>; Claudia T. Mathias-Kramer, MA<sup>1</sup>; Christiane S. Hartog, MD<sup>1,5</sup>; Frank Bloss, MD, PhD<sup>1,2</sup>

**Objectives:** Perceiving nonbeneficial treatment is stressful for ICU staff and may be associated with burnout. We aimed to investigate predictors and consequences of perceived nonbeneficial treatment and to compare nurses and junior and senior physicians. **Design:** Cross-sectional, multicenter paper-pencil survey on personal and work-related characteristics, perceived nonbeneficial treatment, burnout, and intention to leave the job. **Setting:** Convenience sample of 23 German ICUs.

**Subjects:** ICU nurses and physicians. **Interventions:** None. **Measurements and Main Results:** A total of 847 questionnaires were returned (91% response); 778 had complete data for final multivariate analyses. Nonbeneficial treatment was in median perceived "sometimes." Adjusted for covariates, it was perceived more often by nurses and junior physicians (both  $p \leq 0.001$  in comparison to senior physicians), while emotional exhaustion was highest in junior physicians ( $p < 0.015$  in comparison to senior physicians and nurses), who also had a higher intention to leave than nurses ( $p = 0.024$ ). Nonbeneficial treatment was predicted by high workload and low quality collaboration with other departments (both  $p \leq 0.001$ ). Poor nurse-physician collaboration predicted perception of nonbeneficial treatment among junior physicians and nurses (both  $p < 0.001$ ) but not among senior physicians ( $p = 0.793$ ). Nonbeneficial treatment was independently associated with the core burnout dimension emotional exhaustion ( $p < 0.001$ ), which significantly mediated the effect between nonbeneficial treatment and intention to leave (indirect effect: 0.11 [95% CI: 0.06–0.18]). **Conclusions:** Perceiving nonbeneficial treatment is related to burnout and may increase intention to leave. Efforts to reduce perception of nonbeneficial treatment should improve the work environment and should be tailored to the different experiences of nurses and junior and senior physicians. (Crit Care Med 2017; 45(3):e265–e73).

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<sup>3</sup>Department of Work and Organizational Psychology, Helmut Schmidt University Hamburg, Germany.

<sup>4</sup>Department of Work and Organizational Psychology, Helmut Schmidt University Hamburg, Germany.

<sup>5</sup>Department of Work and Organizational Psychology, Helmut Schmidt University Hamburg, Germany.

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### Clinicians' Perceptions of Futile or Potentially Inappropriate Care and Associations with Avoidant Behaviors and Burnout

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**Abstract**

**Background:** Futile or potentially inappropriate care (futile/PIC) for dying inpatients leads to negative outcomes for patients and clinicians. In the setting of rising end-of-life health care costs and increasing physician burnout, it is important to understand the causes of futile/PIC, how it impacts on care and relates to burnout. **Objectives:** Examine causes of futile/PIC, determine whether clinicians report compensatory or avoidant behaviors as a result of such care and assess whether these behaviors are associated with burnout. **Design:** Online, cross-sectional questionnaire. **Setting/Subjects:** Clinicians at two academic hospitals in New York City. **Methods:** Respondents were asked the frequency with which they observed or provided futile/PIC and whether they demonstrated compensatory or avoidant behaviors as a result. A validated screen was used to assess burnout. **Measurements:** Descriptive statistics, odds ratios, linear regressions. **Results:** Surveys were completed by 349 subjects. A majority of clinicians (91.3%) felt they had provided or "possibly" provided futile/PIC in the past six months. The most frequent reason cited for PIC (61.0%) was the insistence of the patient's family. Both witnessing and providing PIC were statistically significantly ( $p < 0.05$ ) associated with compensatory and avoidant behaviors, but more strongly associated with avoidant behaviors. Provision of PIC increased the likelihood of avoiding the patient's loved ones by a factor of 2.40 (1.82–3.19), avoiding the patient by a factor of 1.83 (1.32–2.55), and avoiding colleagues by a factor of 2.56 (1.57–4.20) (all  $p < 0.001$ ). Avoiding the patient's loved ones ( $\beta = 0.55$ , SE = 0.12,  $p < 0.001$ ), avoiding the patient ( $\beta = 0.38$ , SE = 0.17,  $p = 0.03$ ), and avoiding colleagues ( $\beta = 0.78$ , SE = 0.28,  $p = 0.01$ ) were significantly associated with burnout. **Conclusions:** Futile/PIC, provided or observed, is associated with avoidance of patients, families, and colleagues and those behaviors are associated with burnout.

Chamberlin P, Lambden J et al. Clinicians' Perceptions of Futile or Potentially Inappropriate Care and Associations with Avoidant Behaviors and Burnout. J Palliat Med. 2019;22(9):1039–45.

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### Association of Perceived Futile or Potentially Inappropriate Care With Burnout and Thoughts of Quitting Among Health-Care Providers

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**Abstract**

**Background:** Futile or potentially inappropriate care (futile/PIC) has been suggested as a factor contributing to clinician well-being. However, little is known about this association. **Objective:** To determine whether futile/PIC provision is associated with measures of clinician well-being. **Design:** Cross-sectional, self-administered online questionnaire. **Setting:** Two New York City Hospitals. **Participants:** Attending physicians, residents, nurses, and physician assistants in the fields of internal medicine, surgery, neurology, or intensive care. **Exposure(s):** Provision of perceived futile/PIC. **Measurements:** Pain outcomes included (1) clinician burnout, measured using the Physician Worklife Study screen; (2) clinician depression, measured using the Patient Health Questionnaire; and (3) intention to quit, measured using questions assessing thoughts of leaving their job and how seriously it is being considered. **Results:** Of 1784 clinicians who received surveys, 349 participated. Across all clinicians, 91% reported that they either had or had possibly provided futile/PIC to a patient. Overall, 43.4% of clinicians screened positive for burnout syndrome, 7.8% screened positive for depression, and 35.3% reported thoughts of leaving their job as a result of futile/PIC. The amount of perceived futile/PIC provided was associated with burnout (odds ratio [OR] 3.8 [1.6–30 patients vs 1–2 patients]; 95% confidence interval [CI] 1.1–12.8) and having thoughts of quitting (OR, 7.4 [1.6–30 patients vs 1–2 patients]; 95% CI, 2.0–27), independent of depression, position, department, and the number of dying patients cared for. **Conclusions:** A large majority of clinicians report providing futile/PIC, and such care is associated with measures of clinician well-being, including burnout and intention to quit.

Lambden JP, Chamberlin P et al. Association of Perceived Futile or Potentially Inappropriate Care With Burnout and Thoughts of Quitting Among Health-Care Providers. Am J Hosp Palliat Care. 2019;36(3):200–6.

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Mini Breakout

- What do you think is the role of futile or potentially inappropriate care in contributing to burnout?

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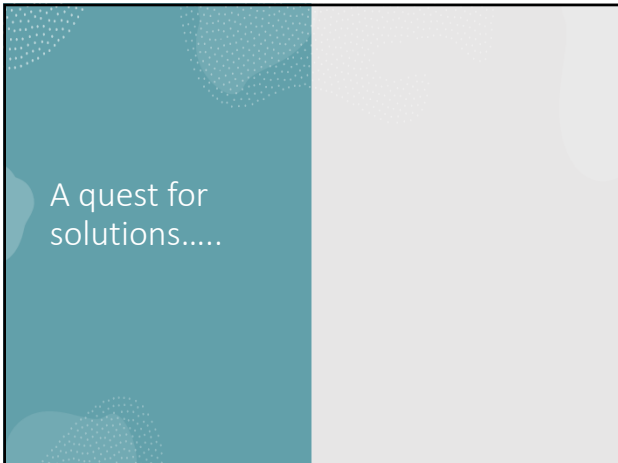
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A quest for solutions.....

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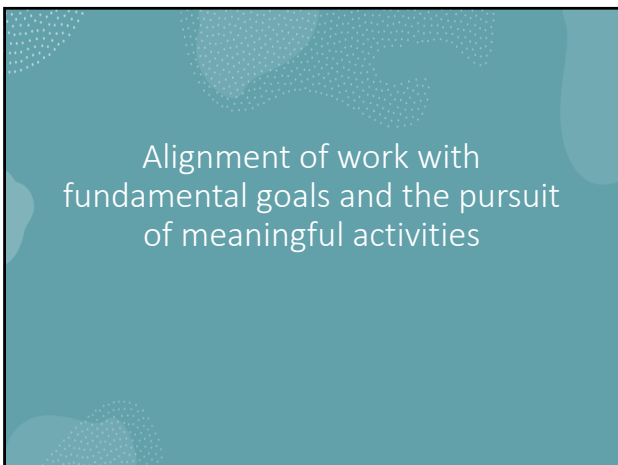
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Alignment of work with fundamental goals and the pursuit of meaningful activities

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### Four cardinal virtues

- Prudence
- Justice
- Fortitude
- Temperance

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**“Compassionomics”**

Compassion has been described as a deep awareness of another’s pain or suffering coupled by the wish to relieve it.

Compassion is said to be evoked when something bad (typically serious) happens to another person, resulting in a desire to help, yet not necessarily resulting in a helping action.

Empathy + Action = Compassion

STEPHEN TRZECIAK, MD, MPH, ANTHONY MAZZARELLI, MD, JD,

**COMPASSIONOMICS**

THE REVOLUTIONARY SCIENTIFIC EVIDENCE THAT CARING MAKES A DIFFERENCE

STEPHEN TRZECIAK  
ANTHONY MAZZARELLI

Foreword by SENATOR CORY BOOKER

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1. Doohan I, Saveman BI. Need for compassion in prehospital and emergency care: a qualitative study on bus crash survivors' experiences. Int Emerg Nurs. 2015;23(2):115-9.

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**Need for compassion in prehospital and emergency care: A qualitative study on bus crash survivors' experiences** 

Isabelle Doohan MSc (PhD Student)<sup>a,b,\*</sup>, Britt-Inger Saveman RNT, PhD (Professor)<sup>a,b,c</sup>

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 Social support

**ABSTRACT**

**Aim:** To explore the survivors' experiences after a major bus crash.  
**Background:** Survivors' experiences of emergency care after transportation related major incidents are relatively unexplored, with research involving survivors mainly focused on pathological aspects or effects of crisis support.  
**Methods:** Semi-structured telephone interviews were conducted with 54 out of 56 surviving passengers 5 years after a bus crash in Sweden. Interviews were analyzed using qualitative content analysis.  
**Results:** Prehospital discomfort, lack of compassionate care, dissatisfaction with crisis support and satisfactory initial care and support are the categories. Lack of compassion in emergency departments was identified as a main finding. Lack of compassion caused distress among survivors and various needs for support were not met. Survivors' desire to be with their fellow survivors the day of the crash was not facilitated after arriving at emergency departments.  
**Conclusions:** Connectedness among survivors ought to be promoted upon arrival at emergency departments. There is a need for emergency department professionals to be sufficiently educated in compassionate care.

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**Short- and long-term subjective medical treatment outcome of trauma surgery patients: the importance of physician empathy**

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**Purpose:** To investigate accident casualties' long-term subjective evaluation of treatment outcome 6 weeks and 12 months after discharge and its relation to the experienced surgeon's empathy during hospital treatment after trauma in consideration of patient-, injury-, and health-related factors. The long-term results are compared to the 6-week follow-up outcomes.  
**Patients and methods:** Two hundred and seventeen surgery patients were surveyed at 6 weeks, and 206 patients at 12 months after discharge from the trauma surgical general ward. The subjective evaluation of medical treatment outcome was measured 6 weeks and 12 months after discharge with the respective scale from the Cologne Patient Questionnaire. Physician Empathy was assessed with the Consultation and Relational Empathy Measure. The correlation between physician empathy and control variables with the subjective evaluation of medical treatment outcome 12 months after discharge was identified by means of logistic regression analysis under control of sociodemographic and injury-related factors.  
**Results:** One hundred and thirty-six patients were included within the logistic regression analysis at the 12-month follow-up. Compared to the 6-week follow-up, the level of subjective evaluation of medical treatment outcome was slightly lower and the association with physician empathy was weaker. Compared to patients who rated the empathy of their surgeon lower than 31 points, patients with ratings of 41 points or higher had a 4.2-fold higher probability to be in the group with a better medical treatment outcome (3.5 and above) on the Cologne Patient Questionnaire scale 12 months after discharge from hospital ( $P=0.009$ ,  $OR=33.5$ , 95% confidence interval: 1.48–12.629).  
**Conclusions:** Physician empathy is the strongest predictor for a higher level of trauma patients' subjective evaluation of treatment outcome 6 weeks and 12 months after discharge from the hospital. Interpersonal factors between surgeons and their patients are possible key levers for improving patient outcomes in an advanced health system. Communication training for surgeons might prepare them to react appropriately to their patients' needs and lead to satisfactory outcomes for both parties.

**Keywords:** long-term outcome, patient-reported outcome, physician-patient interaction, communication, accident, trauma surgery, injury

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**Healthcare provider compassion is associated with lower PTSD symptoms among patients with life-threatening medical emergencies: a prospective cohort study** 

Jeena Moss<sup>1</sup>, Michael B. Roberts<sup>2</sup>, Lisa Shea<sup>1</sup>, Christopher W. Jones<sup>1</sup>, Hope Kilgannon<sup>1</sup>, Donald E. Edmondson<sup>1</sup>, Stephen Trzeciak<sup>4,5</sup> and Brian W. Roberts<sup>1,2\*</sup>

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**Abstract**

**Purpose:** We tested the hypothesis that, during a life-threatening medical emergency, patient perception of health-care provider (HCP) compassion is associated with the subsequent development of post-traumatic stress disorder (PTSD) symptoms.  
**Methods:** Prospective cohort study in the emergency department (ED) of an urban academic medical center. We included adult patients presenting with a life-threatening medical emergency, defined as respiratory or cardiovascular instability requiring a potentially life-sustaining intervention in the ED. We measured patient perception of HCP compassion in the ED using the Consultation and Relational Empathy (CARE) measure, a validated 40-point scale. Blinded to clinical outcomes (including the CARE measure), we assessed PTSD symptoms 1 month post-discharge using the PTSD Checklist for the Diagnostic and Statistical Manual of Mental Disorders-5.  
**Results:** Of the 99/113 (88%) patients who completed follow-up, 25% (95% CI 17–35%) had PTSD symptoms at 1 month. In a multivariable model adjusting for potential confounders (eg, severity of illness score in ED, need for intensive care unit admission, ED overcrowding, and family member emotional support in the ED), patient perception of greater HCP compassion in the ED was independently associated with lower PTSD symptoms at 1 month (odds ratio 0.93 (95% CI 0.89–0.98)). A one-point increase in the CARE measure was associated with a 7% decrease in the odds of developing PTSD symptoms.  
**Conclusions:** PTSD symptoms are common among ED patients with life-threatening medical emergencies. Patient perception of greater HCP compassion during the emergency is independently associated with lower risk of developing PTSD symptoms.  
**Keywords:** Post-traumatic stress disorder, PTSD, Compassion, Empathy

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## Mini Breakout

- Paths to virtue
- Virtue ethics is fundamentally the same for all disciplines of healing professions but opportunities to manifest it are different depending upon discipline and practice type. Can we explore this in your practice setting?

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## Ethical obligations to mitigate burnout - personal

- Interact professionally with other HCW
- Surveillance and support of colleagues
- Maintain your own "wellness"
- Leadership responsibilities
  - Surveillance
  - Promotion of a "Culture of Safety"

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## Ethical obligations to mitigate burnout - institutional

- Support infrastructure for individuals in healthcare
  - Wellness programs
  - Surveillance
  - Trainees and students
- Personal and professional development competencies
- All organizational tiers
- Communitarian supportiveness

"An Ethical Imperative"

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# Communitarianism

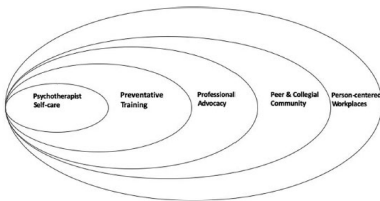


Figure 1. The 5 P Communitarian Model for Preventing Burnout.

Simonato G, Simpson S, Reid C. Burnout as an ethical issue in psychotherapy. *Psychotherapy*. 2019;56(4):470-82.

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Table 2. Peer support principles	
Loving presence	
Psychological safety	
Empathic listening	
Problem solving guidance	
Refueling	
Appreciation	
Coping mechanisms	
Resource connection	
Non-judgemental curiosity	

- American Society of Transplant Surgeons
  - First society-based peer support network

**Peer support networks: A local approach to the global issue of moral injury in surgical training and practice**

*Suniti K. Geewarghese, MD, MSc<sup>1</sup>; Elizabeth A. Pomfret, MD, PhD<sup>2</sup>*

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# Conclusions

Professional burnout is a complex, incompletely understood phenomenon which poses a significant threat to the wellbeing of practitioners and the stability of the healthcare profession

There is an individual, institutional and societal obligation to identify, address and mitigate the condition

Healthcare and tort reform

Communitarian solutions

Alignment of work with fundamental goals and the pursuit of meaningful activities

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