

BRIGHAM HEALTH



BRIGHAM AND
WOMEN'S HOSPITAL

Trauma-Informed Care in the Hospital Setting: Implications for Psychiatric Practice

Nomi C. Levy-Carrick, MD, MPhil

Vice Chair, Clinical Services, Mass General Brigham AMC Dept of Psychiatry

Co-Chair, BWH Trauma-Informed Care Collaborative

Assistant Professor of Psychiatry, Harvard Medical School

Medical Psychiatry CME – Boston, MA September 20, 2025

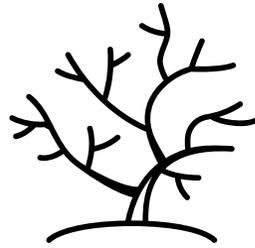


HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

A FOUNDING MEMBER OF **PARTNERS**
HEALTHCARE

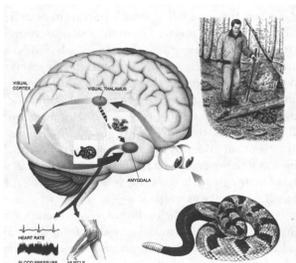
No Disclosures

- Support for Trauma-Informed Music Composition Intervention to Promote Resilience in Survivors of Hospitalization During COVID-19 (2021-23)
- Support for Trauma-Informed Care programming provided by RWJ Foundation Clinical Scholars Fellowship (2018-2021)
- Support for Critical Illness Recovery Program (“After the ICU”) provided by Ariadne Labs SPARK grant (2018-2020)



Learning Points

- 1) Identify the principles of trauma-informed care
- 2) Recognize neurobiological principles underlying trauma-informed practice
- 3) Apply TIC framework to optimize clinical care in hospital settings



The Trauma-Informed Approach

- **Realizes** the widespread impact of trauma and understands potential paths for recovery
- **Recognizes** how trauma affects all individuals involved in an organization, including its own workforce
- **Responds** by fully integrating knowledge about trauma into policies, procedures, and practices
- **Resists** re-traumatization

A TI approach refers to a change
in *organizational* culture.

Trauma-Informed Care: 6 Principles

Safety: Physical &
psychological

Trustworthiness &
transparency

Peer Support

Collaboration &
Mutuality

Empowerment,
Voice, Choice

Cultural Humility
and
Responsiveness

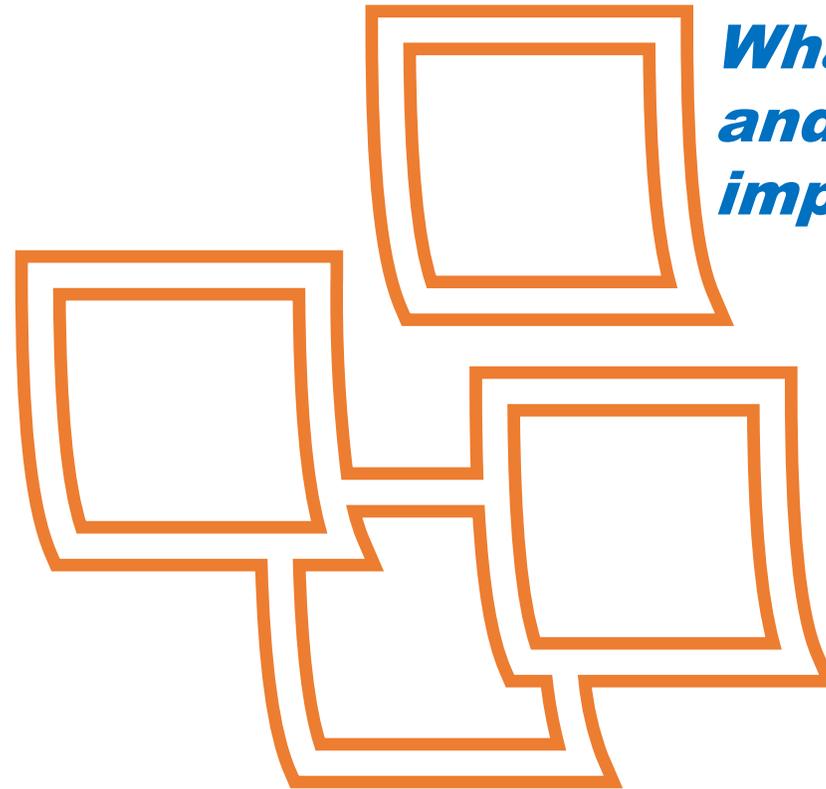
Trauma-Informed Approach

vs

Trauma-Focused Treatment

- Focus on optimizing engagement
 - Universal precautions
 - Universal framing
 - Avoid retriggering
 - Variability of role and context of care
- Addressing trauma experience directly
 - Treatment focused on resolution of trauma-related symptoms
 - May require detailed trauma history as part of the treatment

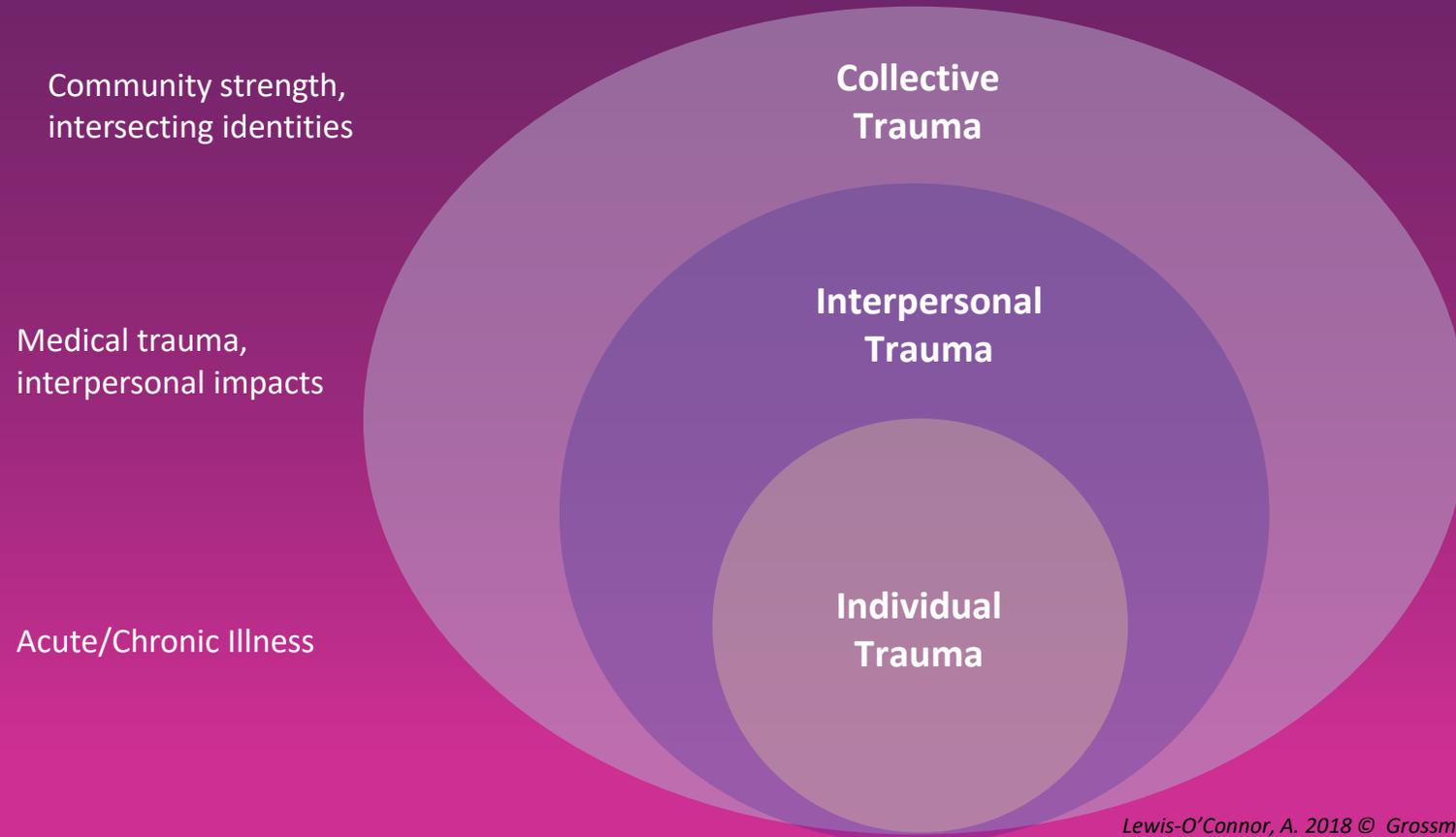
The TIC Paradigm Shift in Health Care



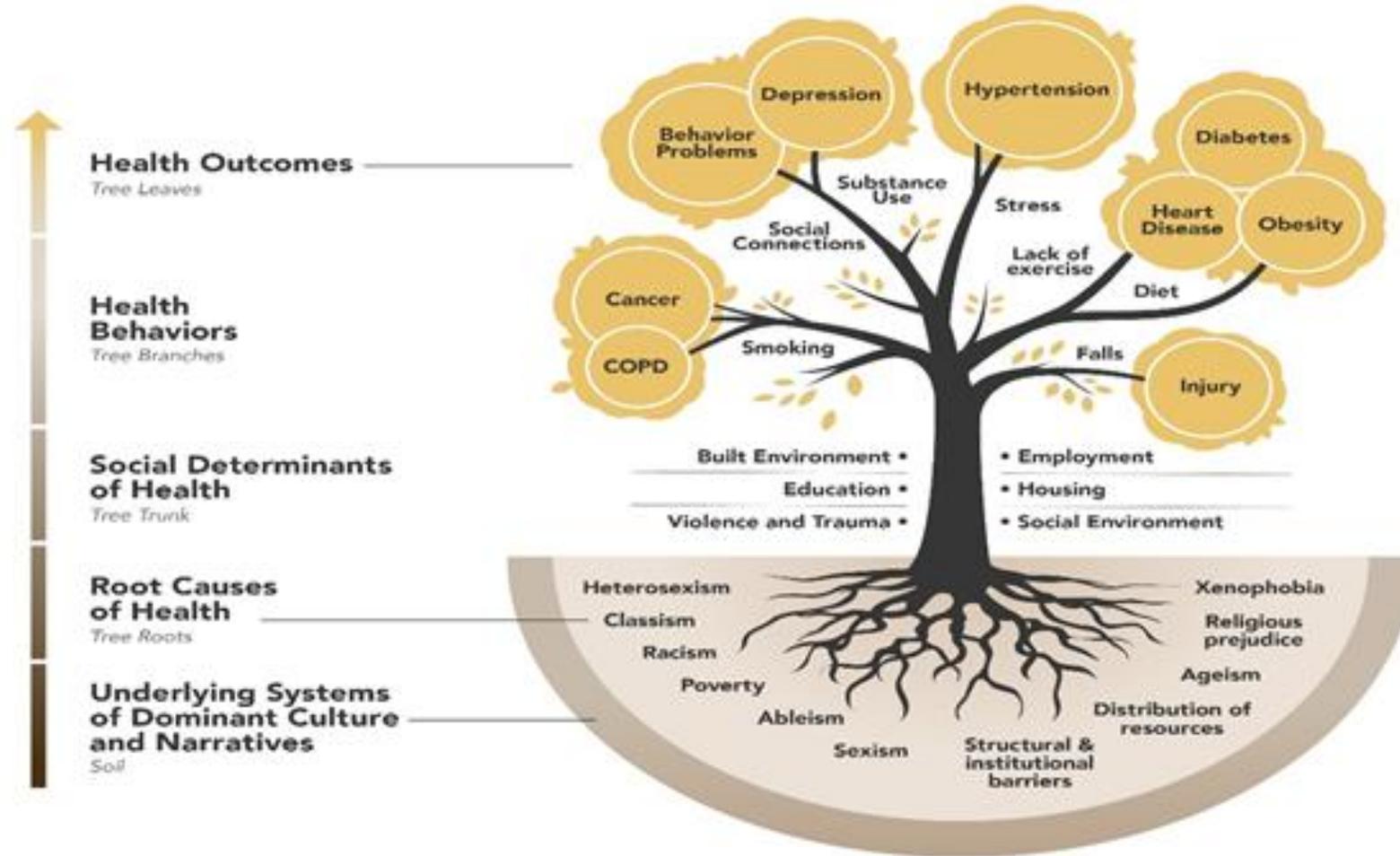
*What happened to you,
and how is that
impacting your health?*

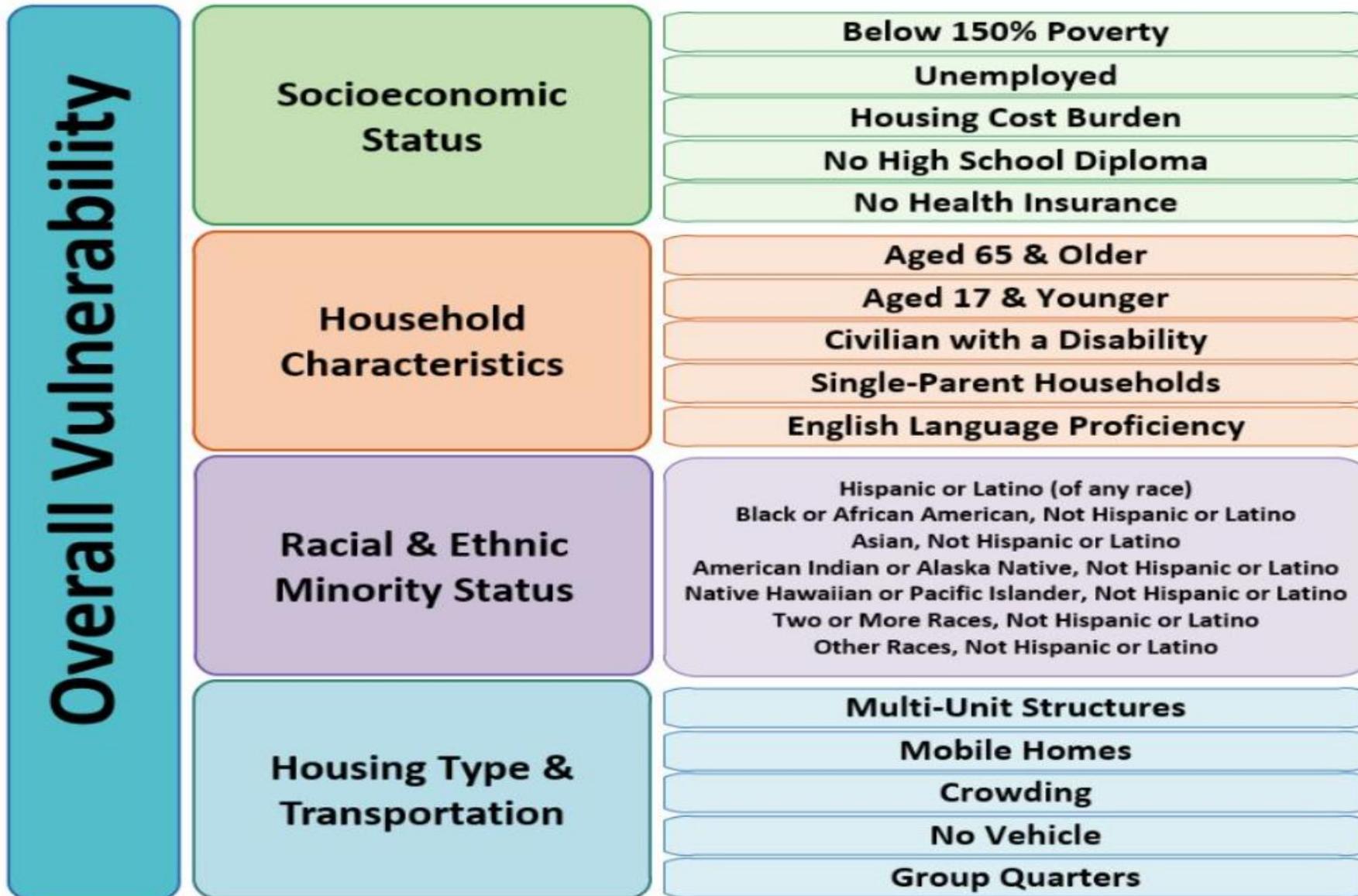
What's wrong with you?

TRAUMA



Health and its Social Determinants





The Social Vulnerability Index and Long-term Outcomes After Traumatic Injury

Juan P. Herrera-Escobar, MD, MPH,†✉ Tarsicio Uribe-Leitz, MD, MPH,*†‡ Joyce Wang, BA,§
Claudia P. Orlas, MD,* Mohamad El Moheb, MD,¶ Taylor E. Lamarre, BA,* Niha Ahmad, BS,*
Ka Man Hau,* Molly Jarman, PhD, MPH,* Nomi C. Levy-Carrick, MD, MPhil,||
Sabrina E. Sanchez, MD, MPH,** Haytham M. A. Kaafarani, MD, MPH,¶ Ali Salim, MD,†
and Deepika Nehra, MD††*

Objective: To evaluate the Social Vulnerability Index (SVI) as a predictor of long-term outcomes after injury.

Background: The SVI is a measure used in emergency preparedness to identify need for resources in the event of a disaster or hazardous event, ranking each census tract on 15 demographic/social factors.

Methods: Moderate-severely injured adult patients treated at one of three

needs assessment tool for clinicians and researchers in identifying communities that may benefit most from targeted prevention and intervention efforts.

Keywords: injury, social vulnerability index, social vulnerability, functional outcomes, long-term outcomes

(*Ann Surg* 2022;276:22–29)

- 3,153 patients [54% male, mean age 61.6]
- High SVI patients compared with low SVI were more likely to
 - have new functional limitations
 - not have returned to work
 - screen positive for PTSD
 - Similar results were obtained when comparing average with low SVI patients
- **Conclusions:** The SVI has potential utility in predicting individuals at higher risk for adverse long-term outcomes after injury.

Ubiquity of Trauma Exposures

- WHO World Mental Health Survey (2022)
 - N=22 countries (>65K surveyed)
 - Lifetime Trauma exposure – 71%
 - Lifetime substance use disorder more common among those with trauma (14.5% v. 5.1%)
- World Mental Health Survey Consortium (2016)
 - N=27 countries
 - Lifetime trauma exposure >70%; 30.5% >4
 - <https://www.sciencedirect.com/science/article/abs/pii/S0376871622003118>
- Averse Childhood Experiences (ACE) Study (1998) N=17,377
 - 63% at least one trauma exposure, 20% >3

IMPACT OF CHILDHOOD TRAUMA



The CDC and Kaiser Permanente surveyed 17,000 of the health plan's members to ask whether they'd had adverse childhood experiences defined as:

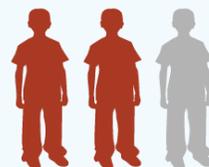
ABUSE	NEGLECT	HOUSEHOLD CHALLENGES
Psychological Physical Sexual	Emotional Physical	Family member experiencing: Domestic abuse Mental illness Imprisonment

The landmark study found those with adverse childhood experiences were at higher risk for:

HEART, LUNG, AND LIVER DISEASE			OBESEITY	DIABETES	DEPRESSION	SUBSTANCE ABUSE

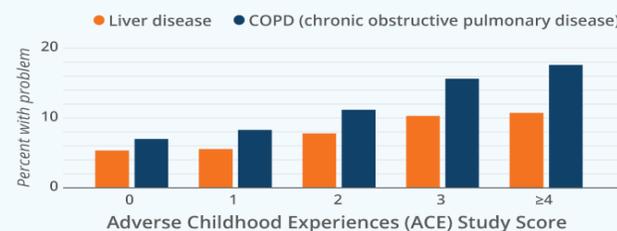
THE STUDY ALSO FOUND

NEARLY TWO THIRDS



of those surveyed experienced at least one event.

The higher the score on ACE survey, the more likely people were to be in poor health:



Sources: CDC ACE Study page <https://www.cdc.gov/violenceprevention/acestudy/> and V. J. Felitti and R. F. Anda, "The Relationship of Adverse Childhood Experiences to Adult Health, Well Being, Social Function, and Health Care," from *The Impact of Early Life Trauma on Health and Disease: The Hidden Epidemic* (Cambridge, England: Cambridge University Press, September 2010).

Health Impact of ACEs on Adults- 2019 MMWR

- 61% report at least 1 ACE
- 16% report 4+ ACEs
- Women, AI/AN, Black, and Other more likely to report 4+ ACEs than Men and Whites

BRFSS
Survey
2015-2017
25 US states
N=63,365

Adjusted Odds Ratio: 4+ vs 0 ACE exposures

Obesity 1.2	Stroke 2.1	Depression 5.3
Diabetes 1.4	Asthma 2.2	COPD 2.8
CHD 1.8	Heavy drinking 1.8	Smoking 3.1

Merrick MT, Ford DC, Ports KA, et al. *Vital Signs*: Estimated Proportion of Adult Health Problems Attributable to Adverse Childhood Experiences and Implications for Prevention — 25 States, 2015–2017. *MMWR Morb Mortal Wkly Rep* 2019;68:999-1005. DOI: <http://dx.doi.org/10.15585/mmwr.mm6844e1external icon>.

> [J Acad Consult Liaison Psychiatry](#). 2024 Sep-Oct;65(5):451-457. doi: 10.1016/j.jaclp.2024.02.007.
Epub 2024 Feb 29.

Psychiatric and Substance Use Disorders and Their Association With Clinical Outcomes in Diabetic Ketoacidosis and Hyperosmolar Hyperglycemic Syndrome

Jacinta Leyden ¹, Amy Uber ², Juan P Herrera-Escobar ², Nomi C Levy-Carrick ²

Affiliations + expand

PMID: 38431209 DOI: [10.1016/j.jaclp.2024.02.007](#)

- Of 7,056 patients with DKA/HHS, **66.9% have a concurrent psychiatric disorder.**
- Pts w/concurrent psychiatric disorder admitted for DKA/HHS were:
 - more likely to have **multiple admissions**,
 - to leave AMA, to be on **renal dialysis**,
 - to have a **lower age of mortality**.

Multicenter Study > Ann Surg. 2021 Dec 1;274(6):e1162-e1169.

doi: 10.1097/SLA.0000000000003780.

Mental Health Burden After Injury: It's About More than Just Posttraumatic Stress Disorder

Juan P Herrera-Escobar^{1 2}, Anupamaa J Seshadri², Ewelina Stanek², Kaye Lu¹, Kelsey Han³, Sabrina Sanchez⁴, Haytham M A Kaafarani³, Ali Salim², Nomi C Levy-Carrick⁵, Deepika Nehra²

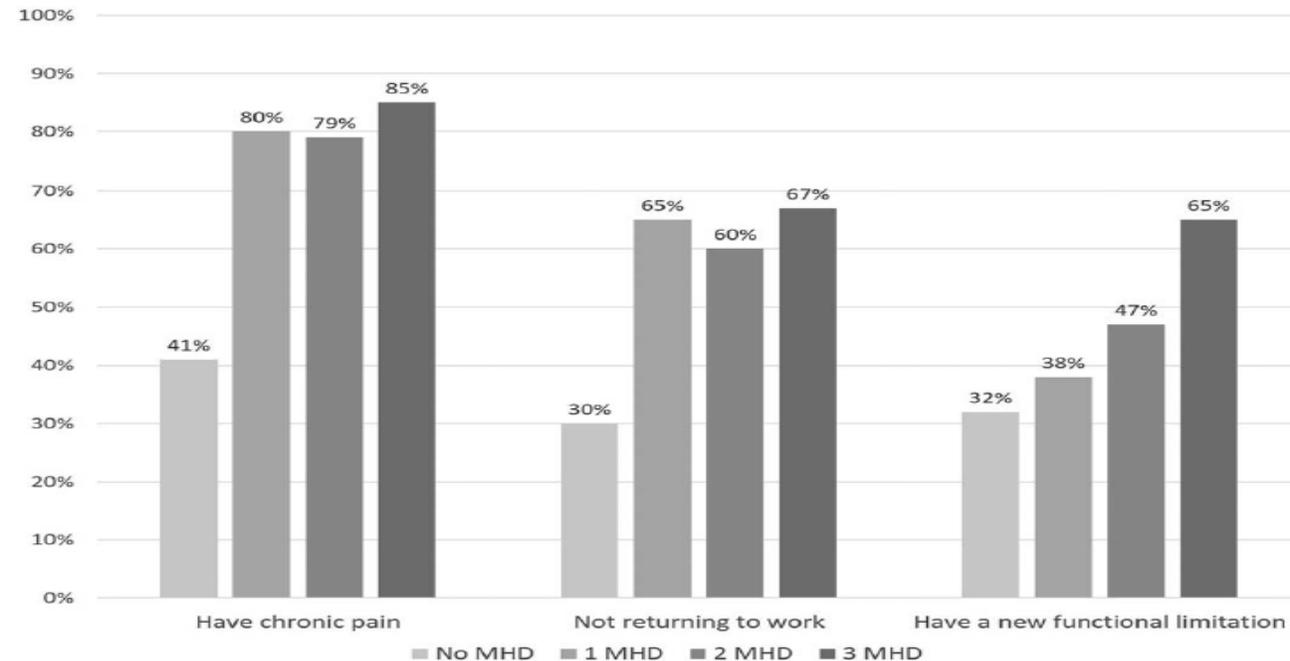
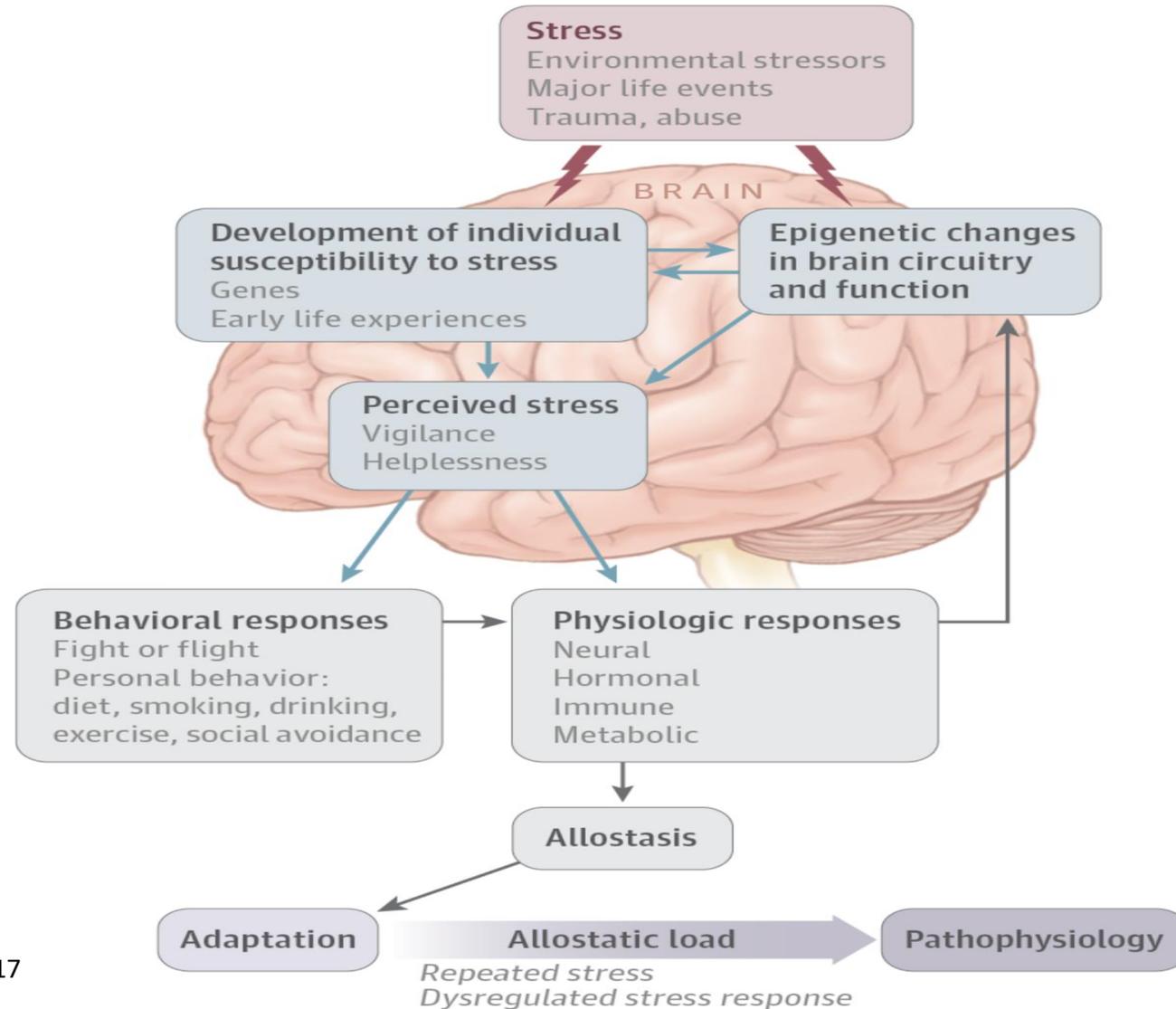
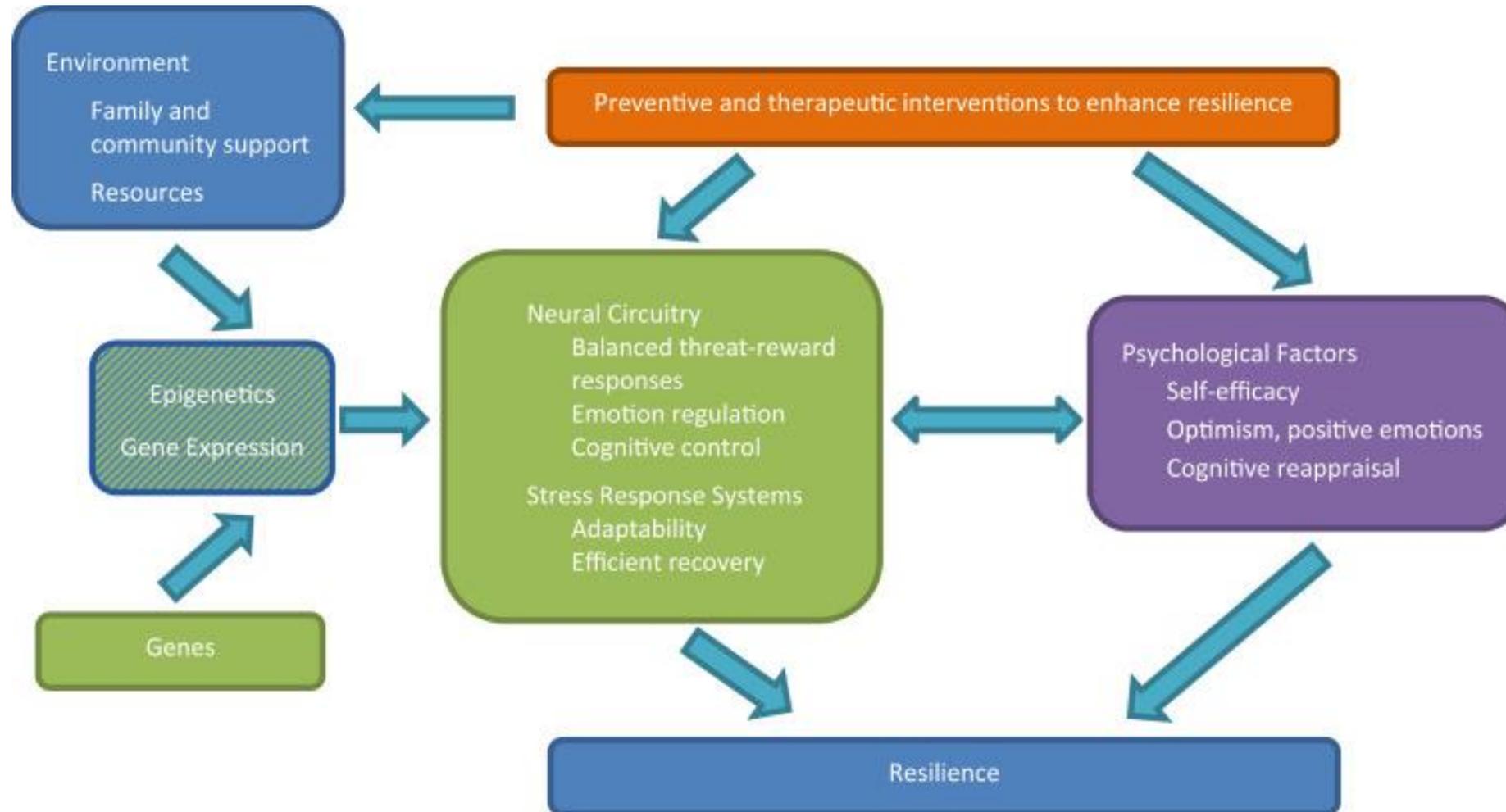


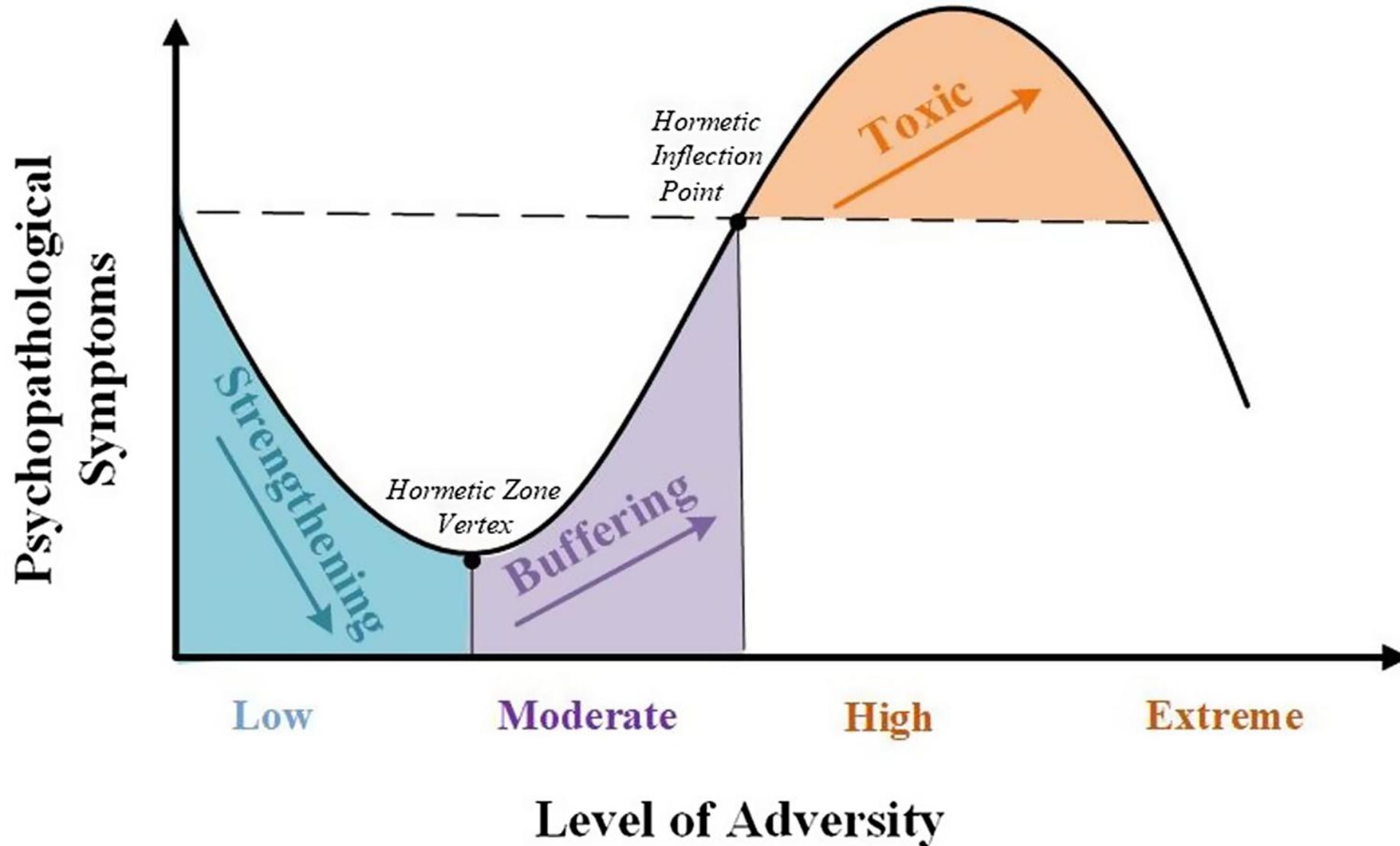
FIGURE 3. Proportion of patients who have chronic pain, have not returned to work or have a new functional limitation for an activity of daily living 6–12 mo after injury. No MHD indicate no positive screen for PTSD, depression or anxiety; 1 MHD indicates a positive screen for PTSD, depression, or anxiety; 2 MHD indicates a positive screen for PTSD and depression, PTSD and anxiety or anxiety and depression; 3 MHD indicates a positive screen for PTSD, depression, and anxiety. MHD indicates mental health disorder; PTSD, posttraumatic stress disorder.

Stress response: seeking allostasis



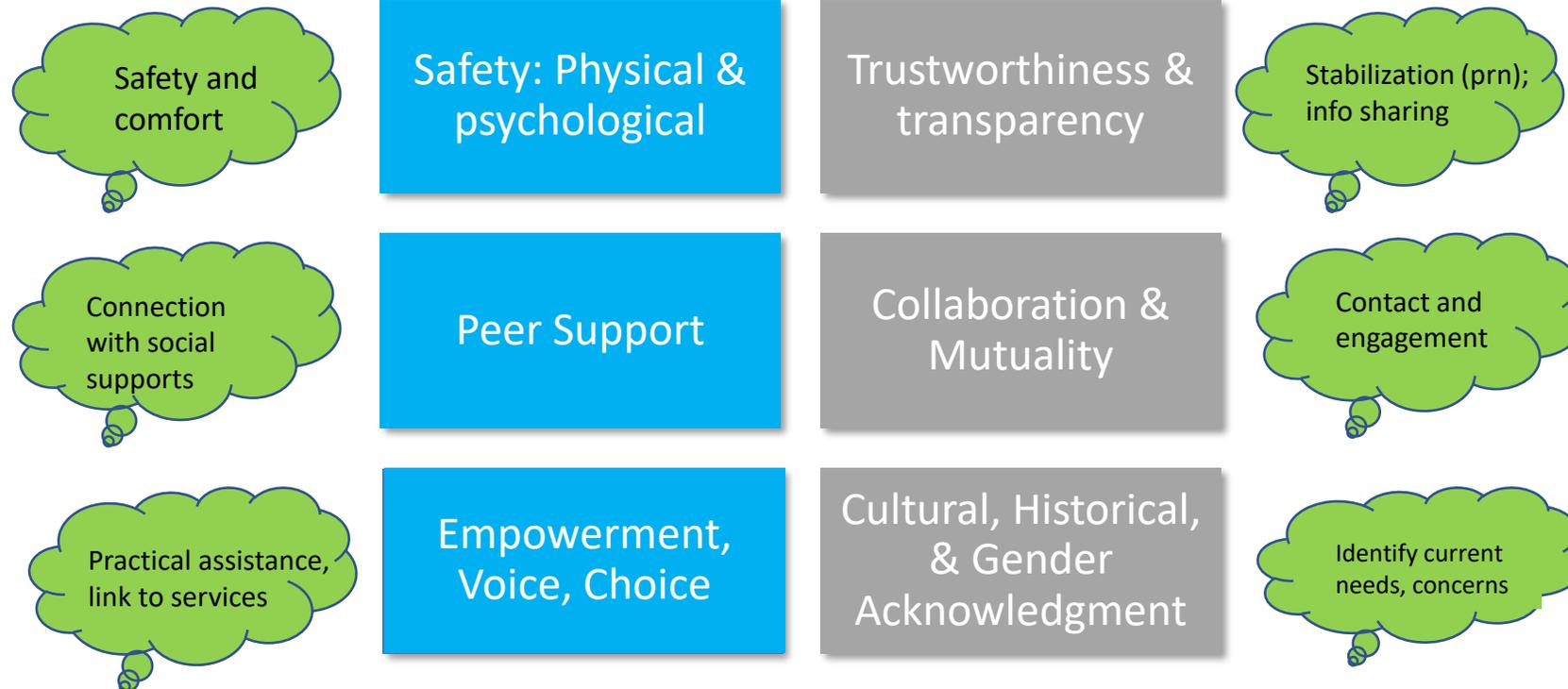
Resilience





Trauma-Informed Care Guiding Principles

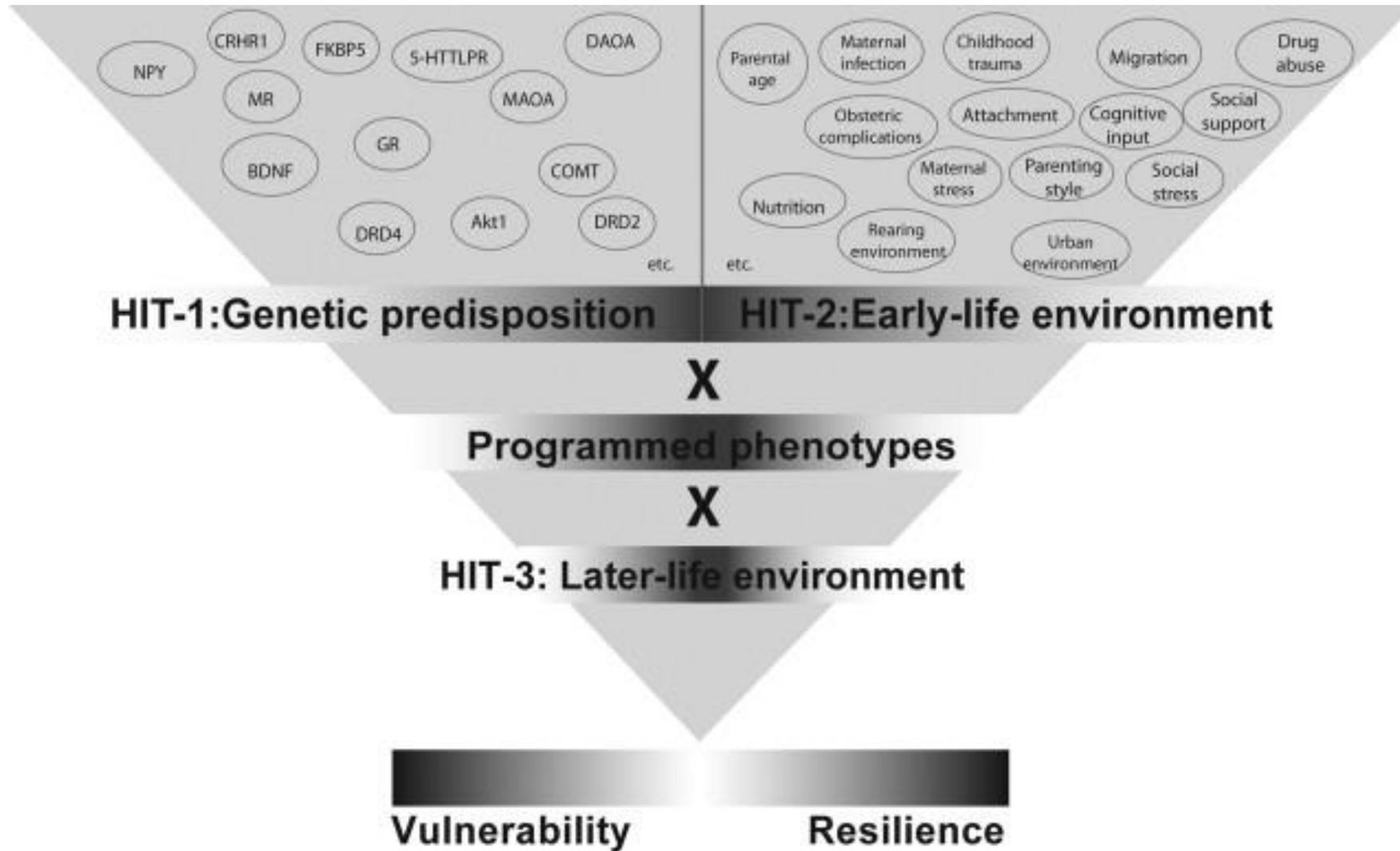
Corollaries to PFA Core Actions and VA's Stress First Aid



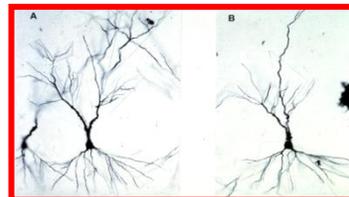
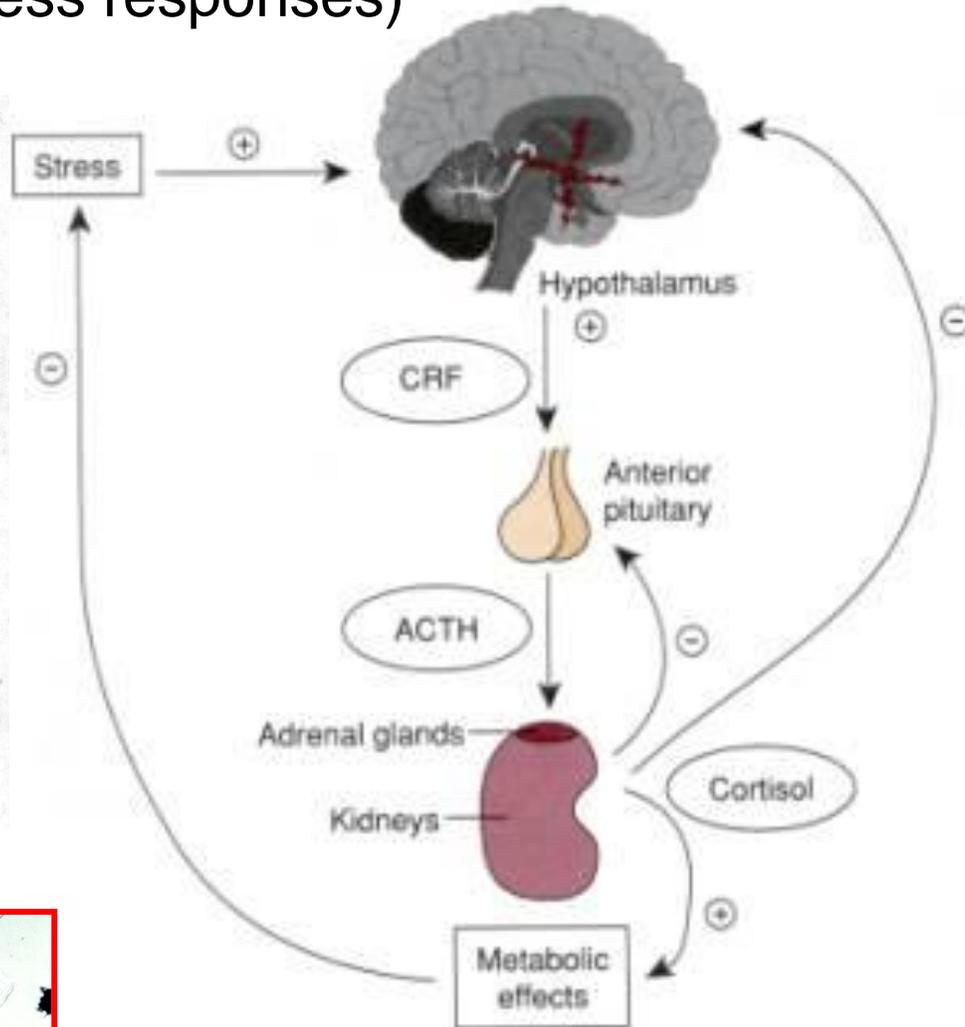
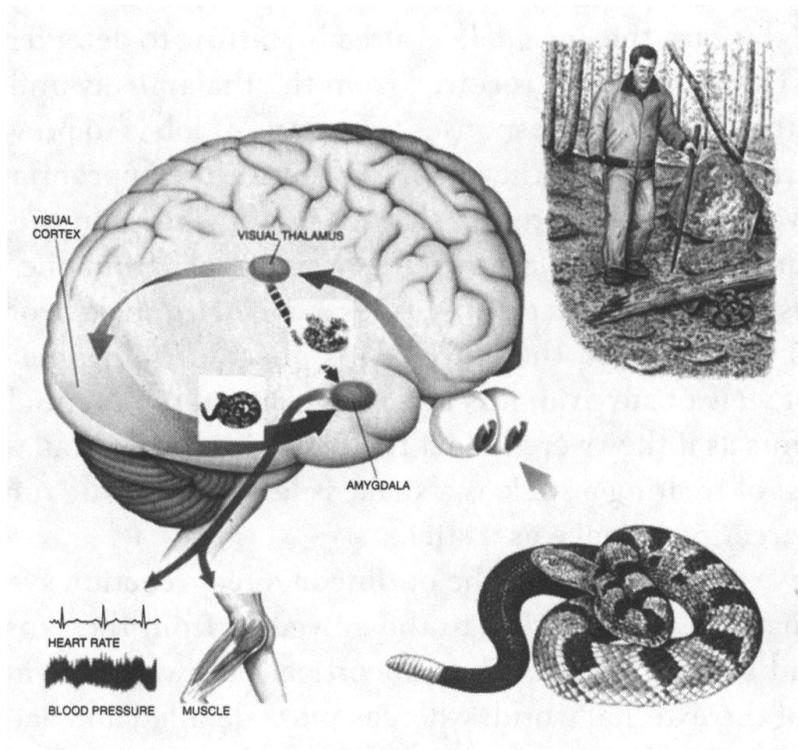
I hate that moment when
you're tired
and sleepy but
as soon as you
go to bed,
your body is like
Just Kidding..

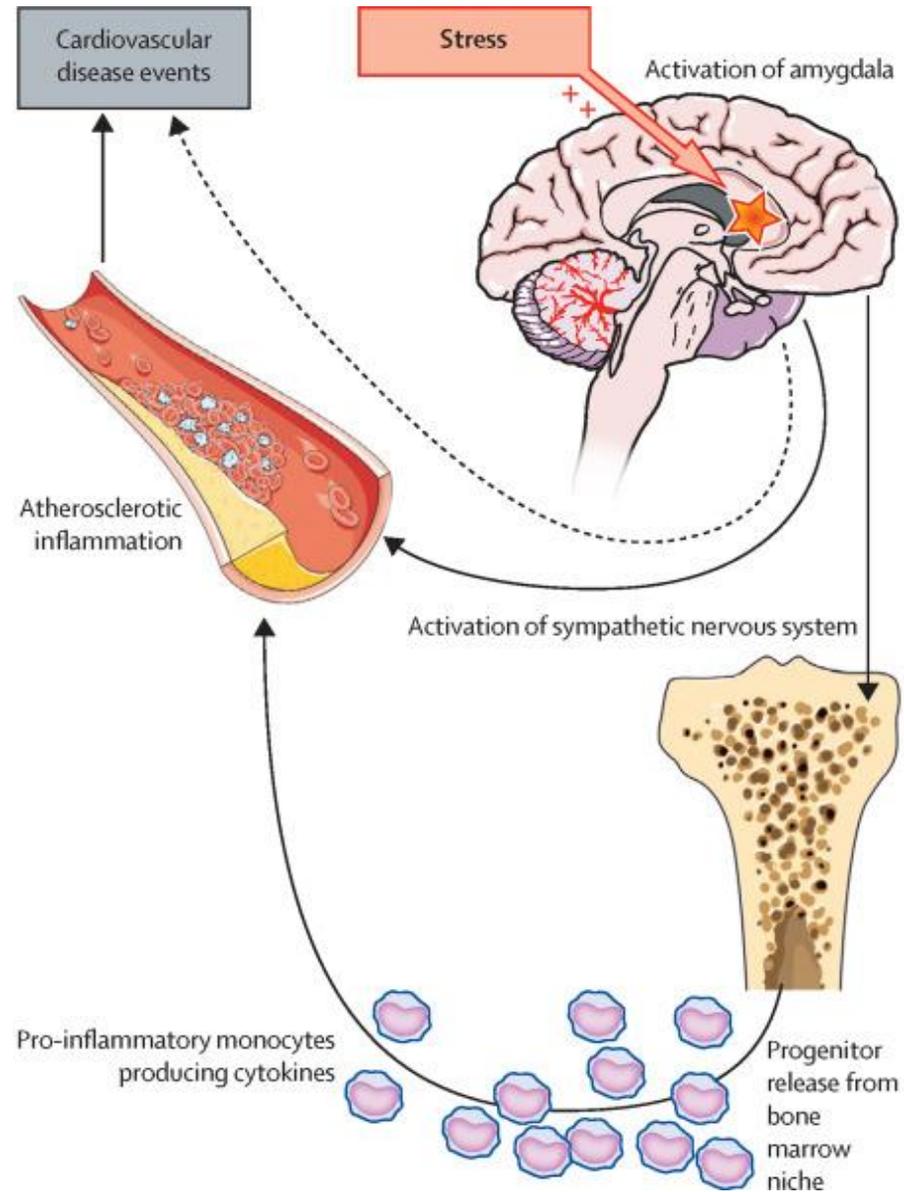


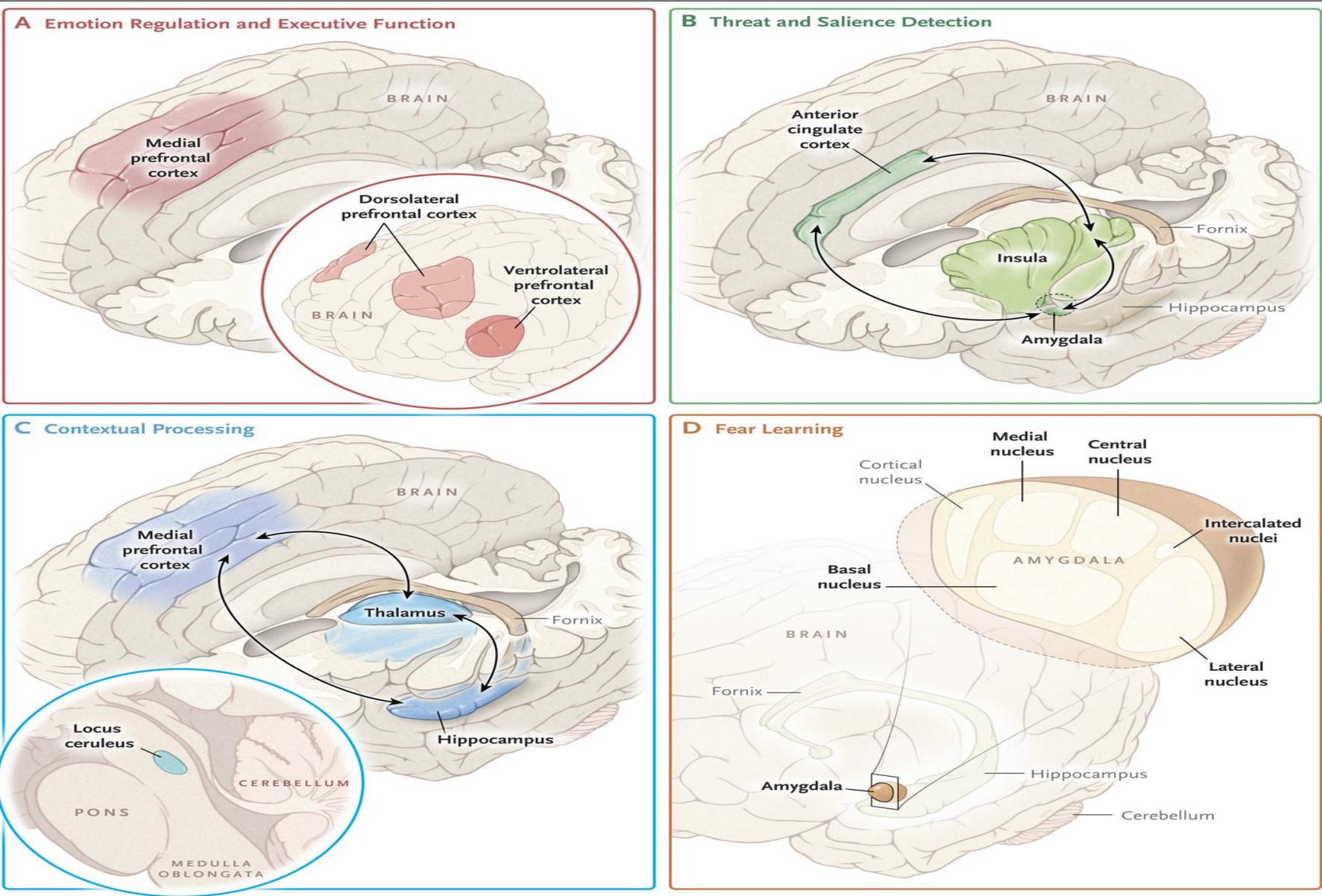
<https://ifunny.co/picture/i-hate-that-moment-when-you-re-tired-and-sleepy-ggOJmYfu4?s=cl>



Neurobiopsychosocial perspectives (or, sympatho-adrenergic stress responses)







Strategies to Optimize Engagement:

#1 Universal Precautions

Assume **every** person has survived some adversity.



Inquire about the **impact** of trauma
instead of the trauma itself.

#2 Universal Framing

Explain:

- **What** will be done
- **How** it will be done
- **Why** it is necessary

Say what
you will
do *before*
you do it

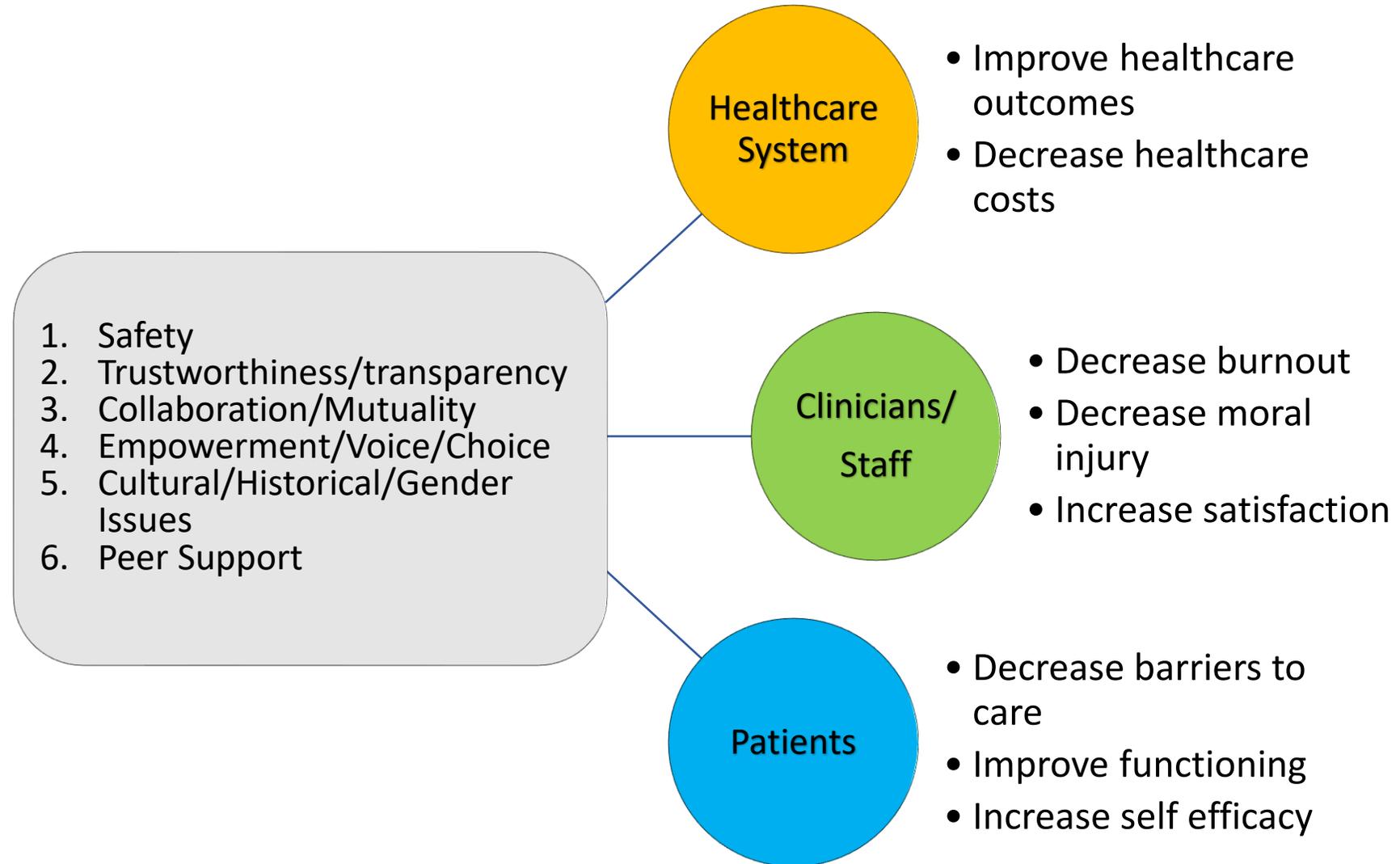
“We’ll start by asking about the symptoms you’re experiencing right now...”

“We do not need to revisit your trauma-experiences at this time...”

“We will also do a review of memory and attention, that is part of the standard exam...”

#3 Critical awareness of role and context

- **Team-based care**
 - Clinical vs non-clinical
 - Treater vs peer support
- **Across the health system**
 - Screening
 - Evaluation
 - Prevention
 - Treatment – and the nature of treatment
 - Referral



Care settings

- Consultation vs “Intake”
- Admission indication (primary psych vs med/surg)
 - Delirium
 - Dysregulation
- Levels of care, transitions of care
- Ambulatory/longitudinal challenges

The bedside exam

- **Trauma Informed Approach**
 - Knock on door[frame] and introduce oneself/others prior to entering
 - When applicable, see if there is a chair(s) – if none, bring one in for interview if pt not intubated
- **Consider starting with cognitive testing**
 - “I’m going to start with a 2-minute exam of memory and concentration, if that’s ok; then we can move on to hearing more about your experience”
 - If non-verbal, do CAM-ICU to get a sense of whether yes/no is reliable (ie when answering questions about pain) and **SAVEAHAART** to get a sense of how much they’re attune to environment regardless of ability to demonstrate engagement. Can also ask basic commands.

The bedside interview

- **Review of Systems**
 - Can start with basics of pain, nausea, SOB, thirst, hunger, etc to create normalizing frame and also framework for understanding nature of psych symptoms
- If patient with adequate mental status for more of an interview, still **avoid re-asking history**
 - “I’ve reviewed your chart and don’t want you to have to repeat all the history you’ve already shared.”
 - “Is there anything that hasn’t come up yet that you might want to add?”
 - “There are a few details I wanted to clarify to make sure we’re offering as personalized a treatment as we can”

The bedside interview - 2

- **Identify sources of resilience** – supporting mature/adaptive defenses during period of vulnerability

And also...

- Consider risk for Post-ICU Syndrome (PICS)
- During the interview, keep an eye on the monitor – baseline and changes in HR? BP? O2 saturation?

Trauma-Informed Care: 6 Principles

Safety: Physical &
psychological

Trustworthiness &
transparency

Peer Support

Collaboration &
Mutuality

Empowerment,
Voice, Choice

Cultural Humility
and
Responsiveness

Acknowledgments

<p><u>TIC in Critical Care Recovery</u> Daniela Lamas Stacey Salomon Gerald Weinhouse Anthony Massaro</p>	<p><u>BWH Dept Psychiatry</u> David Silbersweig David Gitlin Sejal Shah Leena Mittal Joji Suzuki Katherine Kosman Lorna Campbell</p>	<p><u>RWJF Clinical Scholars & MGB TIC Initiative</u> Annie Lewis-O'Connor Eve Rittenberg Hanni Stoklosa Samara Grossman Archana Basu</p>
<p><u>Stepping Strong & FORTE</u> Eric Goralnick Juan Herrera-Escobar Adil Haider Deepika Nehra</p>	<p>Go Team(s)!</p>	<p><u>V-Day & beyond</u> Jeffrey Katz & team Mardi Chadwick Balcom Wanda McClain</p>

Thank you!

Questions?

References - 1

- Admon R, Milad MR, Hendler T. (2013) A causal model of post-traumatic stress disorder: disentangling predisposed from acquired neural abnormalities. *Trends in Cognitive Sciences*, 17(7).
- Amar, A., & Lewis-O'Connor, A. (2015) Trauma-Informed Care. In: Sigma Theta Tau, *Nursing Knowledge International*, tentatively titled, "A Practical Guide to Forensic Nursing: Incorporating forensic principles into nursing practice".
- American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (2013), 5th Edition: DSM-5. Arlington VA: American Psychiatric Publishing.
- Benjet C, Bromet E, Karam EG, et al. The epidemiology of traumatic event exposure worldwide: results from the World Mental Health Survey Consortium. *Psychol Med*. 2016;46(2):327-343
- Creamer M, Burgess P, McFarlane AC. Post-traumatic stress disorder: Findings from the Australian National Survey of Mental Health and Well-being. *Psychol Med*. 2001;31(7):1237-1247.
- Daskalakis NP, Bagot RC, Parker KJ, Vinkers CH, de Kloet ER. The three-hit concept of vulnerability and resilience: Toward understanding adaptation to early-life adversity outcome, *Psychoneuroendocrinology*, Volume 38, Issue 9, 2013, 1858-1873
- Fallot, R., & Harris, M. (2006) "Trauma Informed Services: A Self-Assessment and Planning Protocol." *Community Connections*.
- Felitti, Anda et al., (1997). "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study." *American Journal of Preventive Medicine*, 14, 4, 245-258.
- Felitti V, Anda R et al (1998) Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*. 14 (4): 245-258.
- Grant BF, Chou SP, Goldstein RB, Huang B, Stinson FS, Saha TD, et al. Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry*. 2008;69:533-45.
- Galatzer-Levy IR and Bryan RA (2013) 636,120 Ways to Have Posttraumatic Stress Disorder. *Perspectives on Psychological Science* 8(6) 651-662.
- Huang, L.N., Sharp, C.S., Gunther, T. SAMHSA and National Council for Behavioral Health webinar 8/6/13. "It's Just Good Medicine: Trauma Informed Primary Care." www.integration.samhsa.gov
- Jain KM, Davey-Rothwall, et al (2018) PTSD, Neighborhood Residency and Satisfaction, and Social Network Characteristics among underserved women in Baltimore, Maryland. *Women's Health Issues*, p1-8
- Karam EG, Friedman MJ, Hill ED, et al (2014). Cumulative traumas and risk thresholds: 12-month PTSD in the World Mental Health (WMH) Surveys. *Depress Anxiety*; 31:130-42
- Kessler RC, Rose S, Koenen KC, et al. (2015) How well can post-traumatic stress disorder be predicted from pre-trauma risk factors? An exploratory study in the WHO World Mental Health Surveys. *World Psychiatry* 13:265.
- Kessler, R.C., Berglund, P., Delmer, O., Jin, R., Merikangas, K.R., & Walters, E.E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6): 593-602.

References - 2

- Kubzansky L, Bordelais P, Jun HJ et al. (2014) The weight of traumatic stress: a prospective study of PTSD symptoms and weight status in women. *JAMA-Psych* 71:1:44-51
- LeDoux JL (1994) Emotion, Memory and the Brain. *Scientific American*.
- Lewis-O'Connor, A. & Alpert, E. (2017) Caring for Survivors Using a Trauma Informed Care Framework. *Human Trafficking Is a Public Health Issue: A Paradigm Expansion in the United States*. Editors: Makini Chisolm-Straker, Hanni Stoklosa.
- Lewis-O'Connor, A. & Chadwick, M. (2015). Voice of the patient: informing research, policy and practice on violence against women. *Journal of Forensic Nursing*, 11:4, 188-197.
- McEwan, BS. Allostasis and the Epigenetics of Brain and Body Health Over the Life Course The Brain on Stress *JAMA Psychiatry*. Published online April 26, 2017. doi:10.1001/jamapsychiatry.2017.0270
- McEwen BS, Gray JD, Nasca C. 60 Years of Neuroendocrinology: Redefining Neuroendocrinology: stress, sex and cognitive and emotional regulation. *Journal of Endocrinology* 2015. 226, T67-83
- Perez DL, Matin N, Barsky A, Costumero-Ramos V, et al (2017) Cingulo-insular structural alterations associated with psychogenic symptoms, childhood abuse and PTSD in functional neurological disorders. *J Neurol Neurosurg Psychiatry*. 2017 Jun;88(6):491-497
- Perez DL et al. A Neural Circuit Framework for Somatosensory Amplification in Somatoform Disorders *J Neurol Neurosurg Psychiatry* 2015 doi:10.1136/jnnp-2016-314998
- Roberts AL, Agnew-Blais JC, Spiegelman D, Kubzansky LD, et al (2015). PTSD and incidence of type 2 diabetes mellitus in a sample of women: a 22-year longitudinal study.
- Rosen RL, Levy-Carrick NC, Reibman J, Xu N, Shao Y, Liu M, Ferri L, Kazeros A, Caplan-Shaw CE, Pradhan DR, Marmor M, Galatzer-Levy IR. (2017) Elevated C-reactive protein and posttraumatic stress pathology among survivors of the 9/11 World Trade Center attacks. *Journal of Psychiatric Research* 89, 14-21
- Santaularia et al (2014) Relationships between sexual violence and chronic disease: a cross-sectional study. *BMC Public Health* 14:1286
- Shalev A, Liberzon I, Marmor C. Post-Traumatic Stress Disorder. *New England Journal of Medicine* 2017 376;25.
- Tawakol A, Ishai A, Takx RAP, Figueroa AI, Ali A, Kaiser Y, Truong QA, Solomon CJ, Calcagno C, Mani V, Tang CY, Mulder WJM, Murrough JW. Relation between resting amygdalar activity and cardiovascular events: a longitudinal and cohort study. *Lancet*, Volume 389, Issue 10071, 2017, 834–845. Warsaw, Carole. "Creating Trauma Informed Services and Organizations." Faulkner Hospital Grand Rounds, October 30th, 2014.
- Winning A, Gilsanz P, Koenen KC, et al. (2017) PTSD and 20-year physical activity trends among women. *Am J Prev Med* 52(6) 753-760.
- <https://www.ptsd.va.gov/professional/ptsd-overview/epidemiological-facts-ptsd.asp>
- http://www.medscape.org/viewarticle/751769_transcript
- 2010 National Epidemiologic Survey on Alcohol and Related Conditions
- "The Adverse Childhood Experiences (ACE) Study". *cdc.gov*. Atlanta, Georgia: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Violence Prevention. May 2014. Archived from the original on 27 December 2015.

References - 3

- Hariyanto, Putri, C., Hananto, J. E., Arisa, J., Fransisca V Situmeang, R., & Kurniawan, A. (2021). Delirium is a good predictor for poor outcomes from coronavirus disease 2019 (COVID-19) pneumonia: A systematic review, meta-analysis, and meta-regression. *Journal of Psychiatric Research*, 142, 361–368. <https://doi.org/10.1016/j.jpsychires.2021.08.031>
- Madonna, Enrico, P., Ciappolino, V., Boscutti, A., Colombo, E., Turtulici, N., Cantù, F., Cereda, G., Delvecchio, G., De Falco, S., Chierichetti, M., Savioli, M., Grasselli, G., & Brambilla, P. (2022). Factors Associated With Severity of Delirium Complicating COVID-19 in Intensive Care Units. *Frontiers in Neurology*, 13, 774953–774953. <https://doi.org/10.3389/fneur.2022.774953>
- Fabrazzo, Russo, A., Luciano, M., Camerlengo, A., Catapano, P., Amoroso, B., Catapano, F., & Coppola, N. (2022). Delirium and Psychiatric Sequelae Associated to SARS-CoV-2 in Asymptomatic Patients With Psychiatric History and Mild Cognitive Impairment as Risk Factors: Three Case Reports. *Frontiers in Psychiatry*, 13, 868286–868286. <https://doi.org/10.3389/fpsyt.2022.868286>
- De Sousa Moreira, Barbosa, S. M. B., Vieira, J. G., Chaves, N. C. B., Felix, E. B. G., Feitosa, P. W. G., da Cruz, I. S., da Silva, C. G. L., & Neto, M. L. R. (2021). The psychiatric and neuropsychiatric repercussions associated with severe infections of COVID-19 and other coronaviruses. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 106, 110159–110159. <https://doi.org/10.1016/j.pnpbp.2020.110159>
- Prince, Gerstenblith, T. A., Davydow, D., & Bienvenu, O. J. (2018). Psychiatric Morbidity After Critical Illness. *Critical Care Clinics*, 34(4), 599–608. <https://doi.org/10.1016/j.ccc.2018.06.006>
- Nordness, Bipin Patel, M., Erickson, C. R., Kiehl, A., Jackson, J. C., Raman, R., Pandharipande, P. P., Ely, E. W., & Wilson, J. E. (2021). Depression predicts long-term cognitive impairment in survivors of critical illness. *The Journal of Trauma and Acute Care Surgery*, 90(1), 79–86. <https://doi.org/10.1097/TA.0000000000002955>
- Ahmad, & Teo, S. P. (2021). Post-intensive Care Syndrome. *Annals of Geriatric Medicine and Research*, 25(2), 72–78. <https://doi.org/10.4235/agmr.21.0048>

References - 4

- Voiriot, Oualha, M., Pierre, A., Salmon-Gandonnière, C., Gaudet, A., Jouan, Y., Kallel, H., Radermacher, P., Vodovar, D., Sarton, B., Stiel, L., Bréchet, N., Préau, S., & Joffre, J. (2022). Chronic critical illness and post-intensive care syndrome: from pathophysiology to clinical challenges. *Annals of Intensive Care*, 12(1), 58–58. <https://doi.org/10.1186/s13613-022-01038-0>
- Shima, Miyamoto, K., Shibata, M., Nakashima, T., Kaneko, M., Shibata, N., Shima, Y., & Kato, S. (2020). Activities of daily living status and psychiatric symptoms after discharge from an intensive care unit: a single-center 12-month longitudinal prospective study. *Acute Medicine & Surgery*, 7(1), e557–n/a. <https://doi.org/10.1002/ams2.557>
- Watanabe, Liu, K., Nakamura, K., Kozu, R., Horibe, T., Ishii, K., Yasumura, D., Takahashi, Y., Nanba, T., Morita, Y., Kanaya, T., Suzuki, S., Lefor, A. K., Katsukawa, H., & Kotani, T. (2022). Association between Early Mobilization in the ICU and Psychiatric Symptoms after Surviving a Critical Illness: A Multi-Center Prospective Cohort Study. *Journal of Clinical Medicine*, 11(9), 2587. <https://doi.org/10.3390/jcm11092587>
- Misak, Herridge, M., Ely, E. W., Clay, A., & Mikkelsen, M. E. (2021). Patient and Family Engagement in Critical Illness. *Critical Care Medicine*, 49(9), 1389–1401. <https://doi.org/10.1097/CCM.0000000000005136>
- Bolton, Thilges, S., Lane, C., Lowe, J., & Mumby, P. (2019). Post-traumatic Stress Disorder Following Acute Delirium. *Journal of Clinical Psychology in Medical Settings*, 28(1), 31–39. <https://doi.org/10.1007/s10880-019-09689-1>
- Grover, Sahoo, S., Chakrabarti, S., & Avasthi, A. (2019). Post-traumatic stress disorder (PTSD) related symptoms following an experience of delirium. *Journal of Psychosomatic Research*, 123, 109725–109725. <https://doi.org/10.1016/j.jpsychores.2019.05.003>
- Latour, Kentish-Barnes, N., Jacques, T., Wysocki, M., Azoulay, E., & Metaxa, V. (2022). Improving the intensive care experience from the perspectives of different stakeholders. *Critical Care (London, England)*, 26(1), 1–218. <https://doi.org/10.1186/s13054-022-04094-x>
- <https://www.psychiatry.org/psychiatrists/cultural-competency/education/stress-and-trauma/indigenous-people#:~:text=Intergenerational%20Trauma%3A%20The%20intergenerational%20and,spiritual%20practices%2C%20language%20and%20culture.>
- <https://www.acesaware.org/wp-content/uploads/2022/01/Trauma-resillience-practice-paper.pdf>
- <https://www.medicalnewstoday.com/articles/the-impact-of-historical-trauma-on-american-indian-health-equity>