Department of Psychiatry
SCHOOL OF MEDICINE
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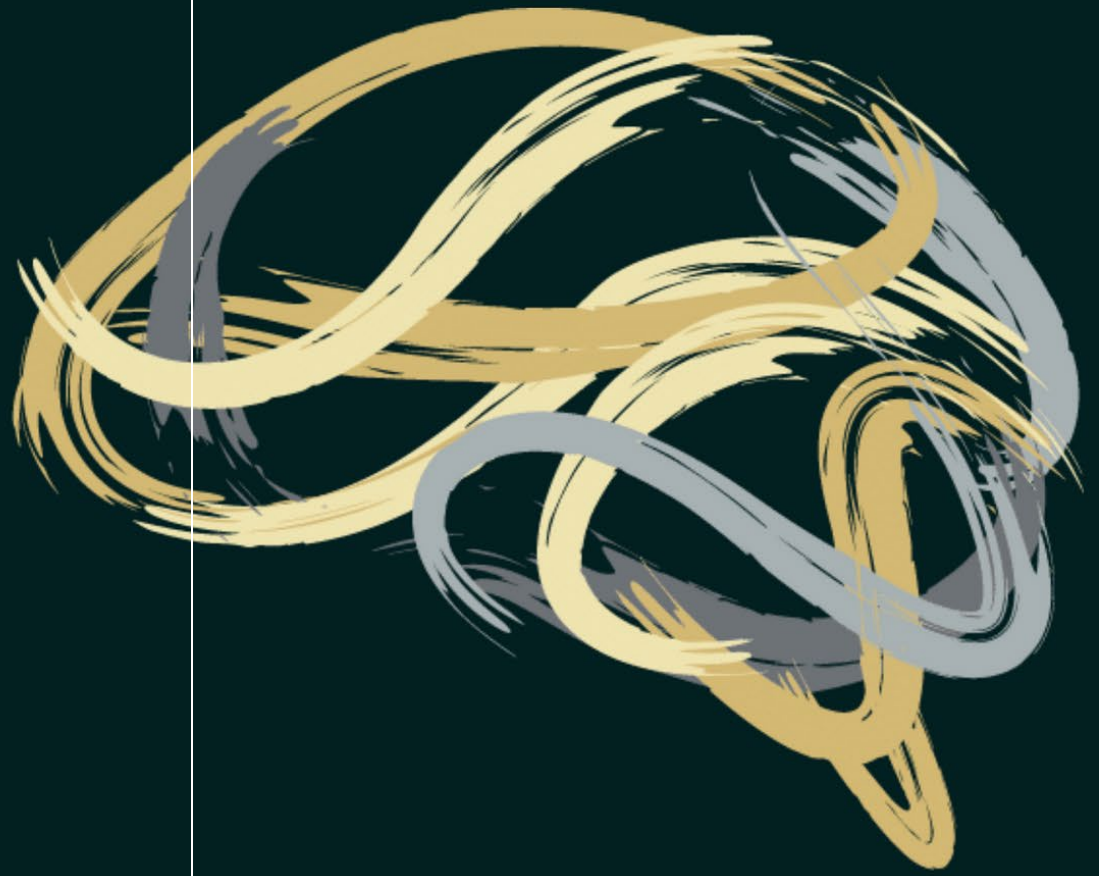

The Invisible Injury: Identity Disruption and Recovery in Adults with Brain Injury

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EASY Consultation

Disclosures

We do not have any relevant financial relationships with ineligible companies.

We are employed by the University of Colorado and will discuss some clinical services/resources we are involved in.

Overview & Learning Objectives

After this session participants will be able to:

- Identify common psychological struggles in adult patients living with brain injury
- Discuss practical interventions to help support adult patients living with brain injury
- Review available and accessible resources for both patients living with brain injury and professionals providing care to adult patients with brain injury.

Background

- 2023 National Health Interview Survey: 3% (~ 9, 757,000) of Americans self-reported experiencing a TBI in the prior year

  CDC: >200,000 TBI –related hospitalizations in 2020 and almost 70,000 TBI-related deaths in 2021.

- Despite this, many TBI patients struggle to access effective, timely care post-injury, especially for mental health effects.

- Permanent neuropsychiatric disabilities affect an estimated 80,000 to 90,000 patients who suffer a TBI.
  - Psychosocial and psychological impairments --> substantial disability & significant family stress

- Even more mild TBIs (i.e., without an associated hospital stay) may result in neuropsychiatric sequelae.

"Many times, patients will come to us and say: 'I'm not the same person I was before my brain injury.' This is where we focus on re-scripting their narrative. We might have to remind them that we can't necessarily get them back to who they were before the injury, but we can get them better than they are now."

- *Dr. Durga Roy, ACLP 2024*

Case

David is a 45-year-old man with presents to your office with complaints of memory issues and depression. His medical history includes multiple prior concussions from playing sports throughout high school and college but a year ago he suffered from a TBI following a severe car accident for which he had a prolonged medical admission and recovery.

Since the accident, he describes poor sleep, depressed mood and struggles with motivation. He has been unable to return to work due to his cognitive struggles which he finds frustrating and finds himself withdrawing from his wife and friends. He finds himself more irritable, which was never an issue before.

Common psychological struggles associated with brain injury

- Risks and vulnerabilities to adjustment
- "Good days and bad days" with cognition and fatigue
- Emotional Dysregulation
  - Irritability
  - Emotional lability
- Mood, anxiety, and post-traumatic reactions
- Identity and Role Disruption
  - Grief for "old self"
  - Loss of social roles
  - Relationship strain
- "I don't look injured"
- Impaired Insight
- Suicide Risk

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Jonasson et al. (2018). Mental fatigue and impaired cognitive function after an acquired brain injury, *Brain and Behavior, 8(*8), doi: 10.1002/brb3.1056

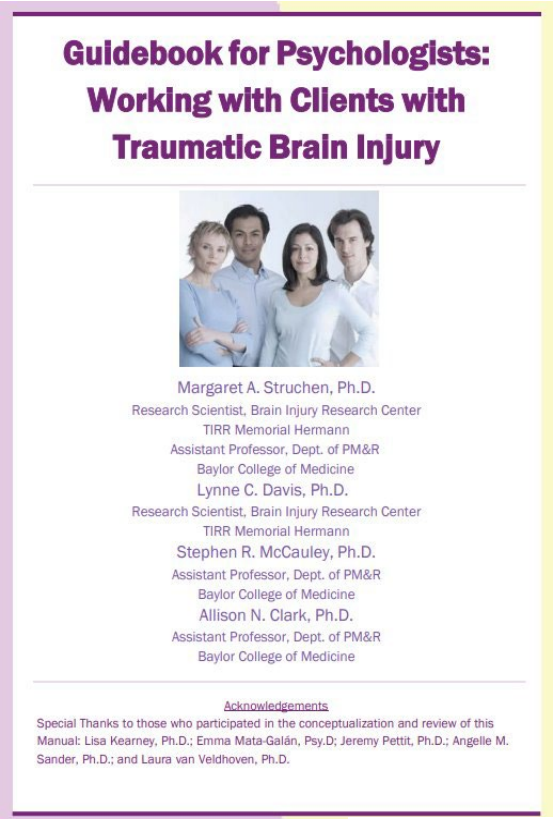
Howlett, Nelson, & Stein (2023). Mental health consequences of traumatic brain injury, *Biological Psychiatry, 91*(5), 413-420. doi: 10.1016/j.biopsych.2021.09.024

Villa, Causer, & Riley (2021). Experiences that challenge self-identity following traumatic brain injury: a meta-synthesis of qualitative research, *Disability Rehabilitation, 43*(23), doi: 10.1037/rep0000462

How to elicit patients' feelings about living with BI

- Validation and normalization first
- Ask about function over abstract emotional inquiry
- Anchor questions to specific contexts
- Ask about identity disruption directly

- Other tools and strategies that may be helpful
  - Shorter prompts to reduce cognitive fatigue
  - Slow pacing and repetition
  - Emotion lists or scales



Guidebook for Psychologists: Working with Clients with Traumatic Brain Injury

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Special Thanks to those who participated in the conceptualization and review of this Manual: Lisa Kearney, Ph.D.; Emma Mata-Galán, Psy.D; Jeremy Pettit, Ph.D.; Angelle M. Sander, Ph.D.; and Laura van Veldhoven, Ph.D.

Coping with identity changes after BI

- Grief reaction
- Narrative therapy or identity reconstruction work
- Acceptance-based approaches (ACT)
- Values-guided goal setting
- Peer support groups for survivors
- Other therapies (e.g., music, art, equine)

https://blogs.und.edu/und-today/2025/01/unmasking-brain-injury/

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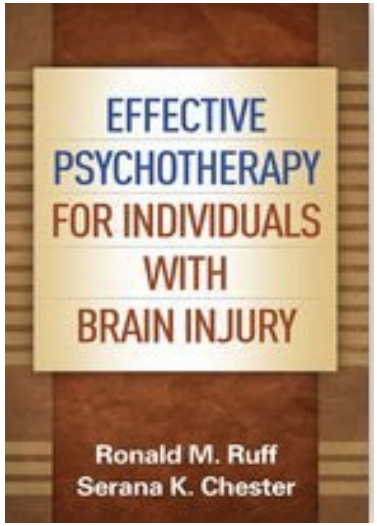
Sander, A. M., Clark, A. N., Arciniegas, D. B., Tran, K., Leon-Novelo, L., Ngan, E., … Walser, R. (2021). A randomized controlled trial of acceptance and commitment therapy for psychological distress among persons with traumatic brain injury. *Neuropsychological Rehabilitation*, *31*(7), 1105–1129. https://doi.org/10.1080/09602011.2020.1762670

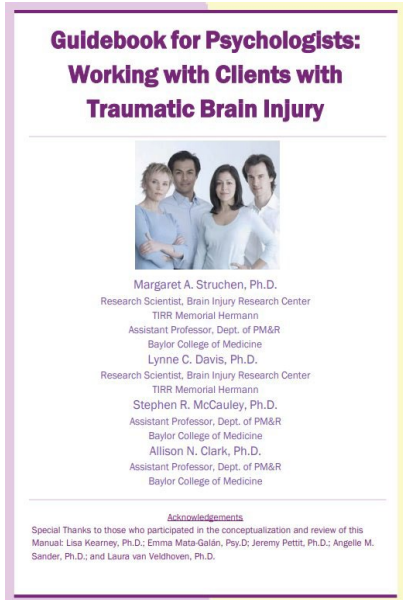
Villa, Causer, & Riley (2021). Experiences that challenge self-identity following traumatic brain injury: a meta-synthesis of qualitative research, *Disability Rehabilitation, 43*(23), doi: 10.1037/rep0000462

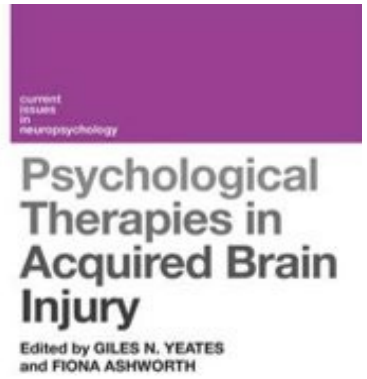
Morris, S.D. (2004). Rebuilding identity through narrative following traumtic brain injury. J of Cognitive Rehabilitation. Retrieved from: https://www.neuropsychonline.com/loni/jcrarchives/vol22/V22I2Morris.pdf

Emotional and Behavioral Regulation

- Modify existing therapeutic modalities
  - Concrete
  - Simplified worksheets
  - Visual aids
  - Experiential
- Structured Problem-Solving Therapy
- Involve family members
  - Coping Ahead & DICE Framework







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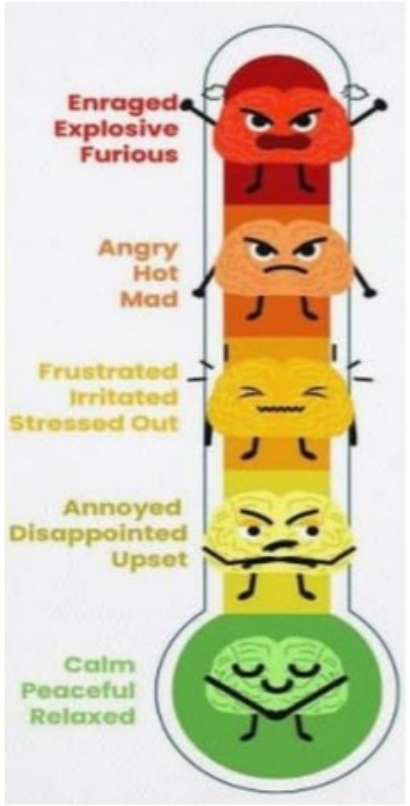
1. STOP *Notice how I am feeling*



2. SLOW DOWN: *Lower the volume of my feelings*


Take a nap


Meditation


Rock/punk

Be the Fonz


Compost/yard work


Pacing or walking


Cold Water


Deep Breath


Exit the situation & come back later


Use my book

3. THINK: ***Why am I feeling this way?***


Overstimulated


Change in my process

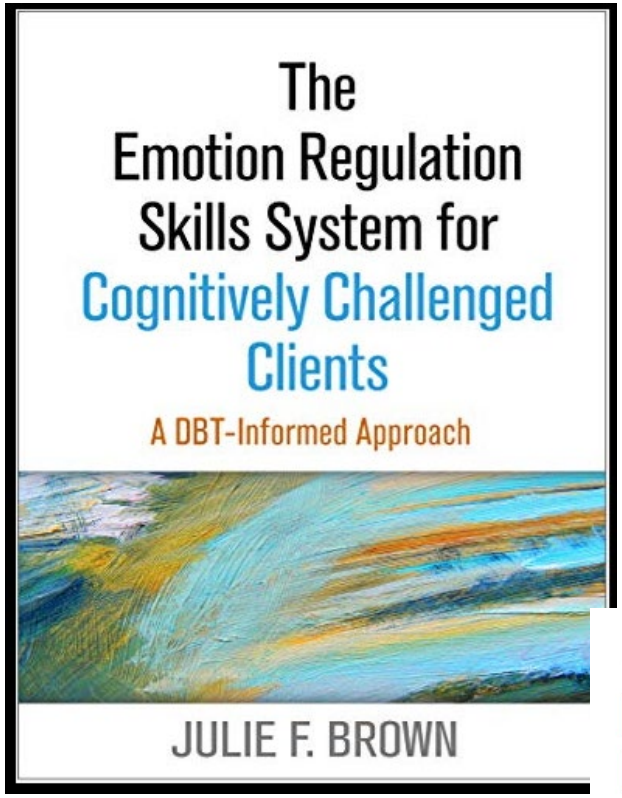
Not being understood

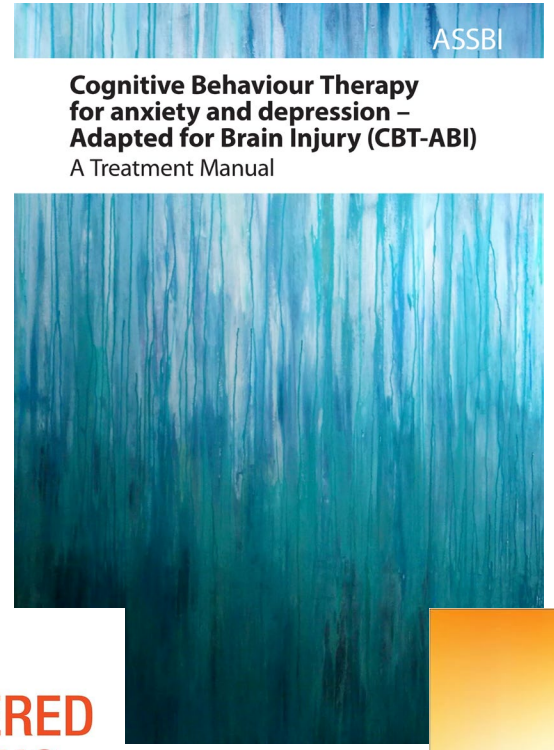

Feeling out of Control

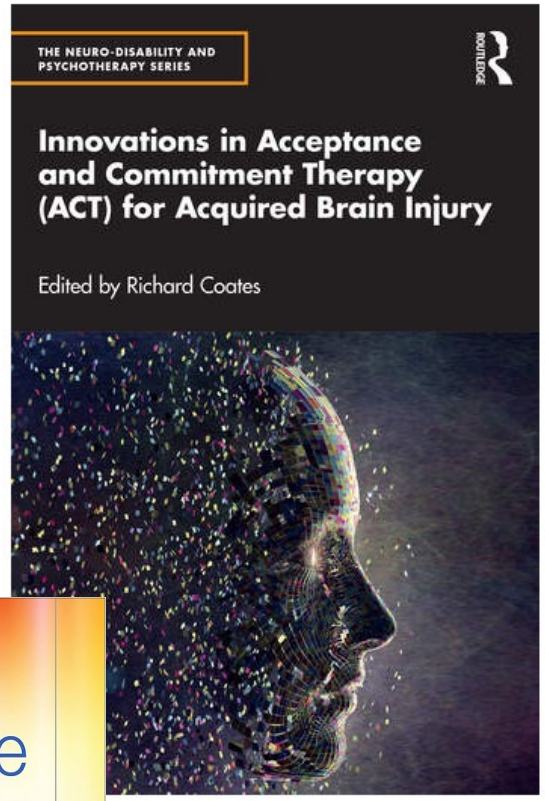
Something else? Pain? Activity too hard?

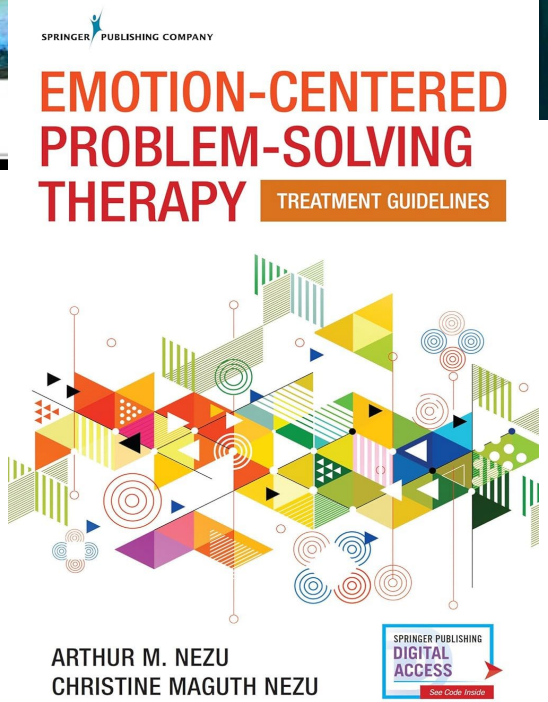
DESCRIBE BEHAVIOR:	**IDENTIFY CAUSE:**
WHAT HELPS TO REDUCE EMOTION/BEHAVIOR	**WHAT WORSENS/ CONTRIBUTES**
PLAN TO TRY:	**EVALUATE: WHAT WORKED/DIDN'T**

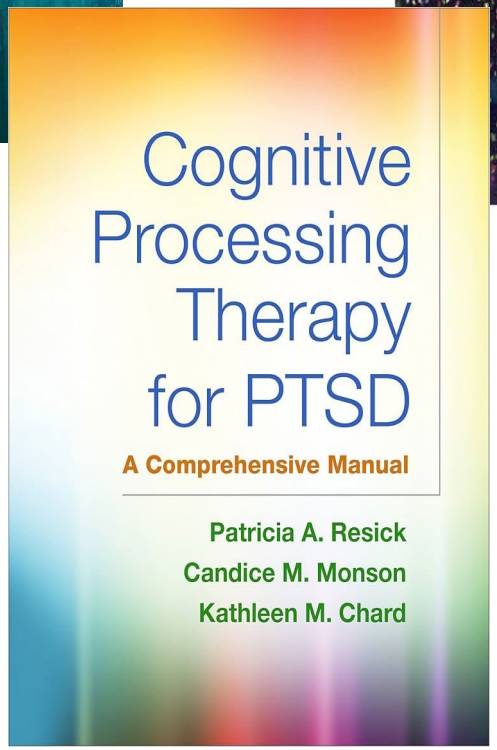
Adapted from: Fraker, J., Kales, H. C., Blazek, M., Kavanagh, J., & Gitlin, L. N. (2014). *The Role of the Occupational Therapist in the Management of Neuropsychiatric Symptoms of Dementia in Clinical Settings*. Occupational Therapy in Health Care, 28(1), 4–20. doi:10.3109/07380577.2013.867468











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Post-concussive Syndrome

- Typically follows *mild* TBI
- Symptoms may be caused, worsened, or maintained by multiple etiologies
- Strong association with
  - Anxiety
  - Depression
  - Sleep Disturbance
  - Expectation Effects

- Treatment Emphasis
  - Psychoeducation on expected recovery
  - Graded return to activity & reduction of avoidance
  - CBT-based interventions
  - Treat comorbid mental health disorders

Quinn, D. K., Mayer, A. R., Master, C. L., & Fann, J. R. (2018). Prolonged Post concussive Symptoms. *The American journal of psychiatry*, *175*(2), 103–111. https://doi.org/10.1176/appi.ajp.2017.17020235
Silverberg, N. D., Iverson, G. L., & Caplan, B. (2013). Cognitive-behavioral management of persistent post-concussive symptoms. *Journal of Head Trauma Rehabilitation, 28*(4), 299–304.

Back to the case

David is a 45-year-old man with presents to your office with complaints of memory issues and depression. His medical history includes multiple prior concussions from playing sports throughout high school and college but a year ago he suffered from a TBI following a severe car accident for which he had a prolonged medical admission and recovery.

Since the accident, he describes poor sleep, depressed mood and struggles with motivation. He has been unable to return to work due to his cognitive struggles which he finds frustrating and finds himself withdrawing from his wife and friends. He finds himself more irritable, which was never an issue before.

What psychological struggles might David be dealing with?

What non-pharmacological interventions (if any) would you consider for David?

Neuropsychiatric Sequelae of Brain Injury (BI)

Personality changes	**Mood changes**	**Anxiety**	**Psychosis**	**Agitation**

Remember David?

David is a 45-year-old man with presents to your office with complaints of memory issues and depression. His medical history includes multiple prior concussions from playing sports throughout high school and college but a year ago he suffered from a TBI following a severe car accident for which he had a prolonged medical admission and recovery.

Since the accident, he describes poor sleep, depressed mood and struggles with motivation. He has been unable to return to work due tohis cognitive struggles which he finds frustrating and finds himself withdrawing from his wife and friends. He finds himself more irritable, which was never an issue before.

Pharmacologic Management for Neuropsychiatric Sequelae of BI

- Generally: Medications effective for primary psychiatric disorders in non-TBI patients are similarly effective in TBI patients.

  Ie. Pharmacologic intervention usually parallels that of primary psychiatric syndromes in post-stroke and post-TBI neuropsych conditions

- BUT! This population is often more sensitive to medications and side effects so:

  "start low, and go slow"

  But avoid undertreating - being overly cautious may lead to inadequate medication trials if doses remain too low or medications are stopped too early

  Goal is a well-tolerated titration & adequate duration

- DLPFC: Executive functioning (working memory, decision making, problem-solving, mental flexibility)
- Orbitofrontal cortex: social behaviors, ability self-monitor/self-correct
- Anterior cingulate: motivation, reward behaviors
- Hippocampus, amygdala: Association with PTSD?

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Table

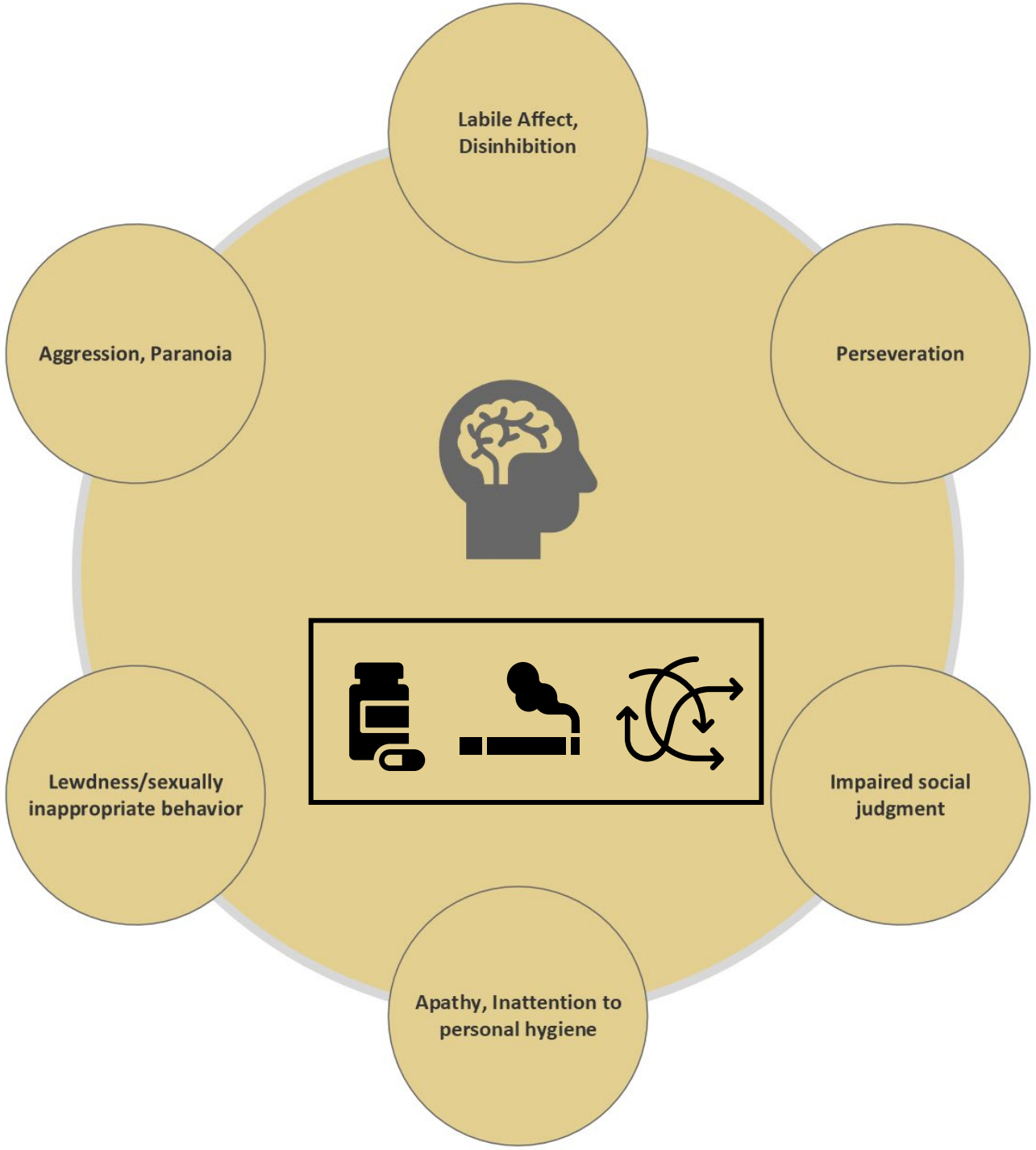
Psychiatric symptoms of stroke by anatomic location

Location		Symptoms
Frontal lobe	Lateral frontal lobe	Aprosodia, executive dysfunction, lack of empathy, poor self-regulation, trouble with attention
	Superior and inferior medial cortices	Apathy, lack of motivation, altered self-regulation, altered emotional processing, disinhibition
	Basal forebrain	Confabulation, reduced motivation, delusions (Capgras syndrome, reduplicative paramnesia)
	Orbital cortex	Personality changes, impulsivity, poor social judgment, reduced empathy, altered self-regulation, lack of goal-directed behavior
	Subcortical	Personality changes, reduced emotions, poor empathy, irritability
Parietal lobe	Dominant	Language deficits
	Nondominant	Neglect/inattention of the opposite side, denial of symptoms, anosodiaphoria, aprosodia, flat affect, personality changes
Occipital lobe		Visual hallucinations (colors, scotomas, metamorphopsia, palinoptic images, complex hallucinations, Charles Bonnet syndrome)
Other locations	Midbrain or thalamus	Peduncular hallucinosis
	Subthalamic nucleus	Hemiballismus, mood and behavioral disturbances, personality changes, hyperphagia
	Caudate	Dorsolateral caudate: abulia, psychic akinesia, decreased problem-solving ability, reduced abstract thinking, diminished spontaneity
		Ventromedial caudate: disinhibition, disorganization, impulsiveness, affective symptoms with or without psychosis

Source: References 1-10

Personality Changes in BI

- Prior 30-year study found that almost ¼ of patients following TBI acquired a personality disorder diagnosis following brain injury
- May have limited insight into personality changes
- Consider including family members and caregivers in the evaluation treatment planning



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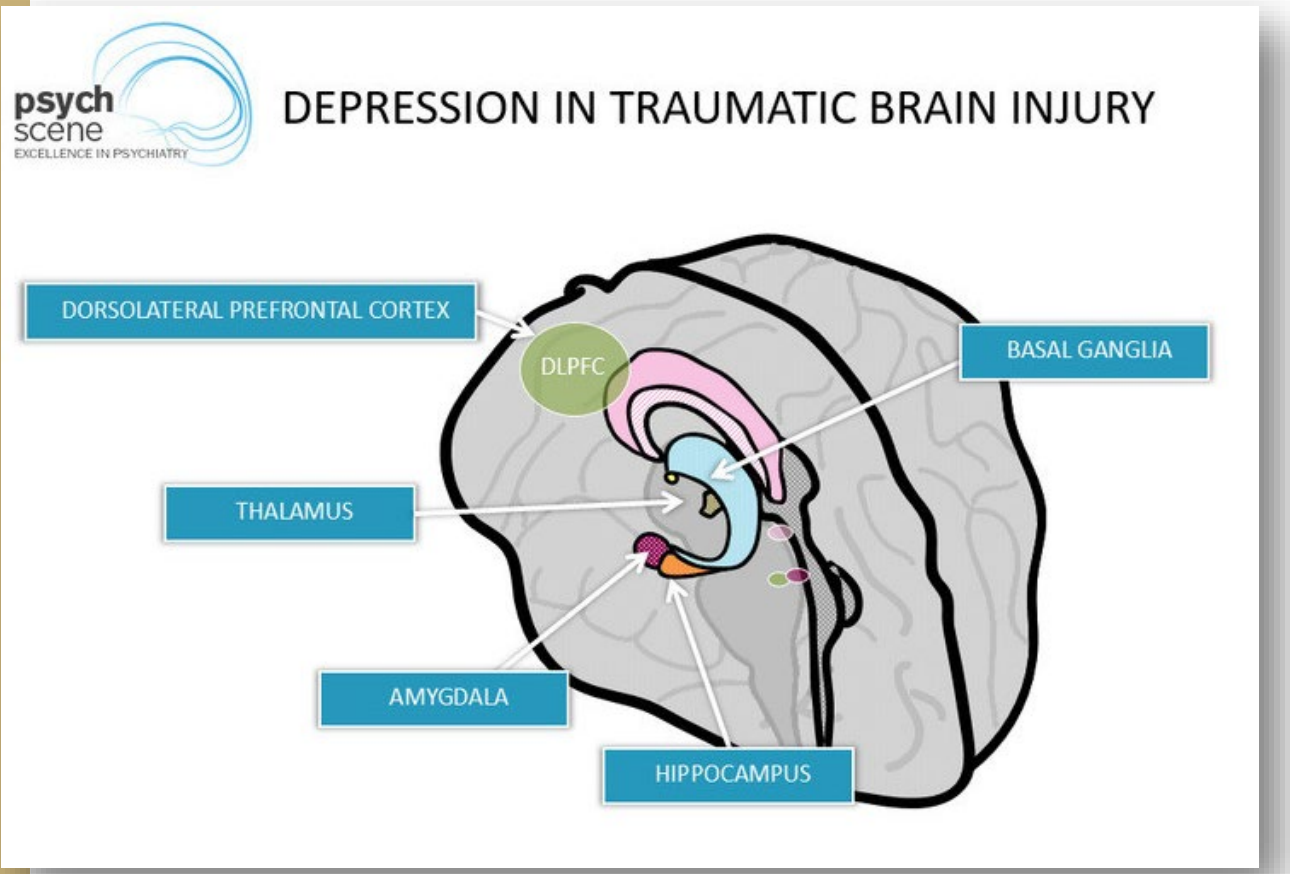
Depression & TBI



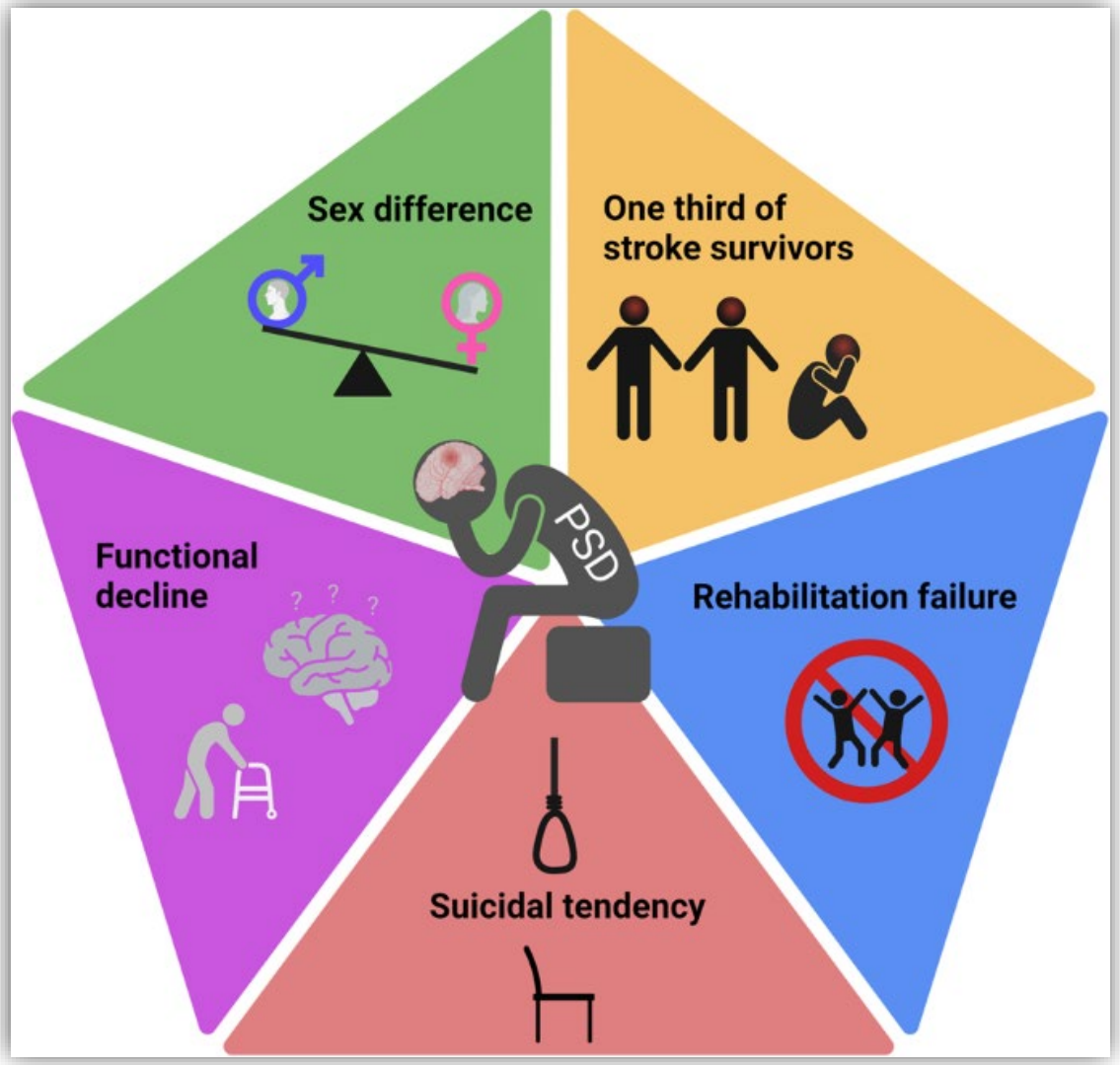
- 26–77% in mild TBI (rate increases with injury severity)
- Predictive & risk factors: Pre-morbid substance abuse, poor functioning, lower education, unstable work history, Neuroanatomic/physiologic changes, lost capabilities, changes in roles, and psychosocial/financial stressors
  - Complicated by: Overlap with cognitive impairment &personality changes
- Associated with poor outcome across multiple domains
- Prominent signs/symptoms: Fatigue, distractibility, anger, irritability, and rumination.
- Suicide risk: Up to 15% of individuals make an attempt in the 5 years after TBI.
  - Risk factors: Intense despair, hopelessness, worthlessness, loss of sense of integrity, relationship breakdown, isolation, prominent insomnia and chronic headache
  - Combination of depression and disinhibition associated with frontal lobe injury

Post-Stroke Depression

- Risk factors: History of depression, pre-stroke functional impairment, living alone, post-stroke social isolation, personal losses and possibly female gender

- Lesion location? (More controversial)

- Complicated by: Overlap between depression and other post-stroke sequelae like flattened affect, monotonous tone of voice, amotivation, decreased insight
  - Communication barriers like aphasia
  - Helpful to focus on specific diagnostic criteria like in the DSM-5 (guilt, worthlessness, hopelessness, anhedonia, suicidality)



Pharmacologic Treatment of Depression in BI

- Often undertreated but early/effective intervention important given impact on recovery

- Antidepressants: Generally shown to be effective
  - Positive studies for SSRIs, SNRIs and nortriptyline
    - Mild – mod PSD: SSRIs generally tx of choice (efficacy, side effect profile, cardiovascular safety)

- Buspirone: Found to be helpful for depression, anxiety, irritability, aggression
  Very favorable safety profile

- ECT: Appears to be an effective treatment for PSD (high response rates, low complication rates but beware cognitive side effects!)

- Positive evidence for psychostimulants (ie. methylphenidate and dextroamphetamine) but have not been studied under placebo-controlled, double-blind conditions
  - Retrospective studies: Response rates 47-80%

- Can be helpful for apathy, depressed mood, cognitive symptoms, fatigue

- Mostly considered in more severe cases impairing MDM capacity, nutritional intake, ability to participate in rehabilitation

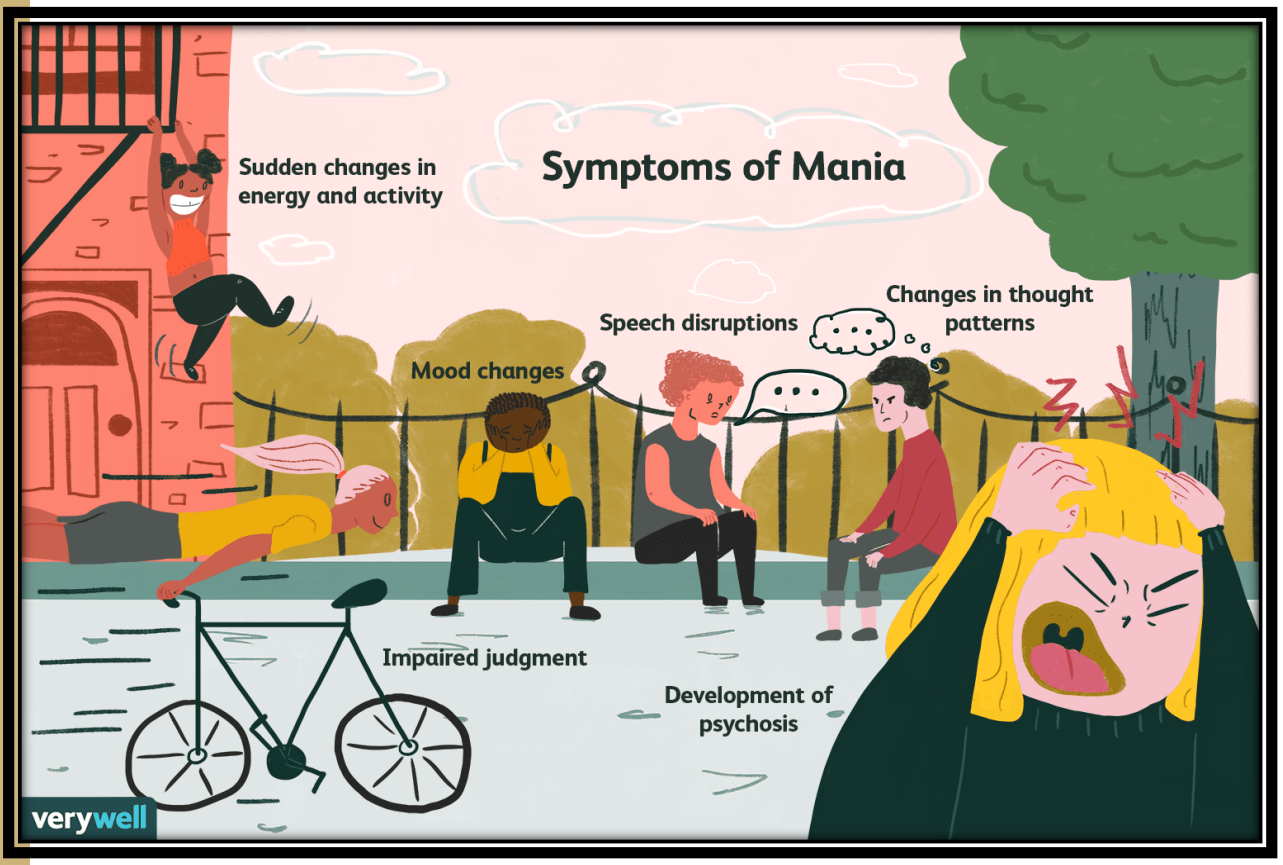
- Beware paradoxical rection, agitation, paranoia, irritability

Table 20-2

Guidelines for the Use of Psychostimulants to Treat Depression

1. Consider possible (relative) contraindications to psychostimulant use:
   a. history of ventricular arrhythmia
   b. recent myocardial infarction
   c. congestive heart failure with reduced ejection fraction
   d. poorly controlled hypertension
   e. tachycardia
   f. concurrent treatment with MAOIs.
2. Initiate treatment with a morning dose of 5 mg methylphenidate or dextroamphetamine (2.5 mg in frail elderly or medically tenuous patients).
3. Check vital signs and response to treatment in 2–4 hours (the period of peak effect).
4. If the initial dose is well tolerated and effective throughout the day, continue with a single daily morning dose.
5. If the initial dose is well tolerated and effective for several hours, with a loss of effect in the afternoon, give the same dose twice per day (in the morning and the early afternoon).
6. If the initial dose is well tolerated but is without significant clinical effect, increase dose by 5 mg per day until a clinical response is achieved, intolerable side effects arise, or 20 mg dose is ineffective (i.e., a failed trial).
7. Continue treatment throughout the hospitalization; stimulants can usually be discontinued at discharge.

Mania in BI



- Similar to mania from bipolar disorder (ie. flight of ideas, pressured speech, a decreased need for sleep, grandiosity, and associated psychotic symptoms)

TBI

- Increased rates of mania compared to the general population
  - Predisposing factors: Family history of affective illness, lesion/injury location (right temporal lobe , right orbitofrontal cortex injuries)
- Seizures also more common in this group --> EEG important + anticonvulsant mood stabilizers often preferred

Post-Stroke

- Rarer (< 1% of patients).
- Lesions in the right orbitofrontal cortex, right basal temporal cortices, dorsomedial thalamus, and head of caudate appear to be associated most often with post-stroke mania
- Right hemisphere strokes > left?

Psychosis in BI

- Psychosis 2/2 TBI considered relatively rare (rates between 0.7% and 9.8%)
  - Controversy over timeline between injury to onset of symptoms (immediately vs up to years later)
  - Relation with frontal & temporal lobe injuries; post-traumatic seizures
  - Symptoms can overlap with cognitive impairment and behavioral changes
  - Patients with primary psychotic disorders also found to have higher incidence of brain injury (exact relationship unclear)

- Post-stroke psychosis is also uncommon (~1–2%).
  - Usually have right temporoparietal lesions
    - Temporal lobe damage --> complex partial seizures + associated psychosis?
  - High rate of associated seizures.

Pharmacologic Treatment of Mania in BI

- Mania should be treated using standard agents and following the same principles as treatment of mania from primary bipolar disorder.

Medication Class	Notes
Anticonvulsant mood stabilizers (ex. Valproic acid, carbamazepine)	• May be preferable (esp. In patients with co-morbid seizures) • Patients with BI may have more side effects with Li
Neuroleptics/antipsychotics	• May be particularly helpful if presence of agitation/aggression • Patients with BI have increased risk of EPS (ie. dystonias, akathisia, parkinsonism) • Atypical (2nd gen) preferred over typical (1st gen)
Benzodiazepines	• May be helpful in acute phase • Risk of disinhibition in BI

Pharmacologic Treatment of Psychosis in BI

- Monitor for EPS
- Similar to mania management in BI: Typically prefer atypical > typical
- Use with caution/monitor closely: Antipsychotics with significant anticholinergic affects and/or those that more significantly decreased seizure threshold (ie. Clozapine)

Anxiety in BI

TBI	Post-Stroke
Most commonly reported: GAD, PTSD • 11%: GAD co-morbid with depression Some evidence that early intervention with CBT for acute stress disorder may prevent PTSD after mild TBI. • Impaired memory of traumatic event a/w lower rates of PTSD?	¼ of PS patients meet criteria for GAD in acute post-stroke period • ¾ of these patients have co-morbid depression A/w negative impact on functional recovery & impaired ADL for up to 3 years post-stroke • PSD + PSA appears additive

Pharmacologic Treatment of Anxiety in BI

- Generally can be treated like any primary anxiety syndrome.

- SSRIs are effective in the treatment of a variety of anxiety disorders
  - Often treatment of choice if co-morbid PSD

- Benzodiazepines:
  - Can be considered for isolated/infrequent anxiety
  - Monitor for ataxia, sedation, paradoxical disinhibition
  - Does not treat co-morbid depression

Other post-stroke phenomena & Medications

	Catastrophic Reaction	Pseudobulbar affect
Symptoms/Notes	• Symptom collection: Desperation & frustration • Rates in acute phase: 3 – 20% • ¾ also have PSD • Risk factor: personal & fam history of psychiatric disorders • A/w anterior sub-cortical lesions & left cortical lesions	• Frequent/easily triggered spells of laughing or crying • 15% in post-stroke patients • Milder cases: Briefer, can occur with appropriate changes in mood • Severe cases: May be inappropriate to context and/or incongruent with mood • Can cause: Embarrassment, social withdrawal, decreased QoL
Rx Treatment	• Consider antidepressants • May improve with treatment of co-morbid PSD	• Consider antidepressants • Nuedexta (dextromethorphan and quinidine)

What pharmacological interventions (if any) would you consider for David?


Available Resources
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Psychiatric Consultation for the Medically Complex Program (PCMC)

- Time-limited (only 1 – 6 sessions with the psychiatrist), not for ongoing or long-term care
- Trainee-based clinic
- Generally need to be seen in person at least once but otherwise can do telehealth
- Patients must be located in Colorado at time of visit
- Offers group & individual therapy, cognitive screening and psychiatric evaluation and medication management
- Can refer via Epic:

  Amb ref to psychiatry --> click PCMC option

  For "referring to" field: Thida Thant for medication management or Holly Gerber for group/individual therapy

  - If patient does not meet criteria (or has exclusionary criteria), triage coordinators may schedule them in the general clinic

About PCMC

The outpatient PCMC Program specializes in brief intervention services for patients who are typically referred by physicians in other medical specialties. PCMC services typically include evaluations and short-term treatment to assess mental health concerns and complications arising secondary to medical disorders or their treatment, assessment for potential organ transplantation or surgical interventions, evaluation for our chronic medical illness group, and psychopharmacological consultations in medically complex patients. Common co-morbid medical conditions include diseases such as post-acute sequelae of COVID-19 (PASC), post intensive care syndrome (PICS), movement disorders, cancer, epilepsy, traumatic brain injury, neurocognitive disorders and endocrine dysfunction. PCMC is now also offering brief individual psychotherapy as well as a variety of group therapy offerings.

Specialty Areas

- Patients who are experiencing psychiatric symptoms or complications secondary to medical disorders or treatments such as:
  - Endocrine disorders
  - Neurological disease (ie. stroke, TBI, Parkinson's disease, dementia, multiple sclerosis, epilepsy)
  - Deep-brain stimulator surgery
  - HIV
  - Transplant
  - Cancer
  - Post acute sequelae of COVID-19 (PASC or Long-Haulers syndrome)
  - Post intensive care syndrome (PICS)
- Patients interested in process and skill building psychotherapy groups for:
  - Post acute sequelae of COVID-19 (PASC or Long-Haulers syndrome)
- Coping with chronic illness
- Patients interested in brief psychotherapy to address challenges associated with medical disorders or treatments such as:
  - Coping with and adjusting to new medical diagnoses
  - Coping with progression or complication of pre-existing medical conditions
  - Traumatic injuries (burn, spinal cord injury, etc.)
  - Medical trauma as a result of treatment for medical conditions

How to do decide who/when to refer to PCMC?

Also typically unable to accept primary FND or somatic symptom disorder patients due to time-limited nature of clinic

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Who we see

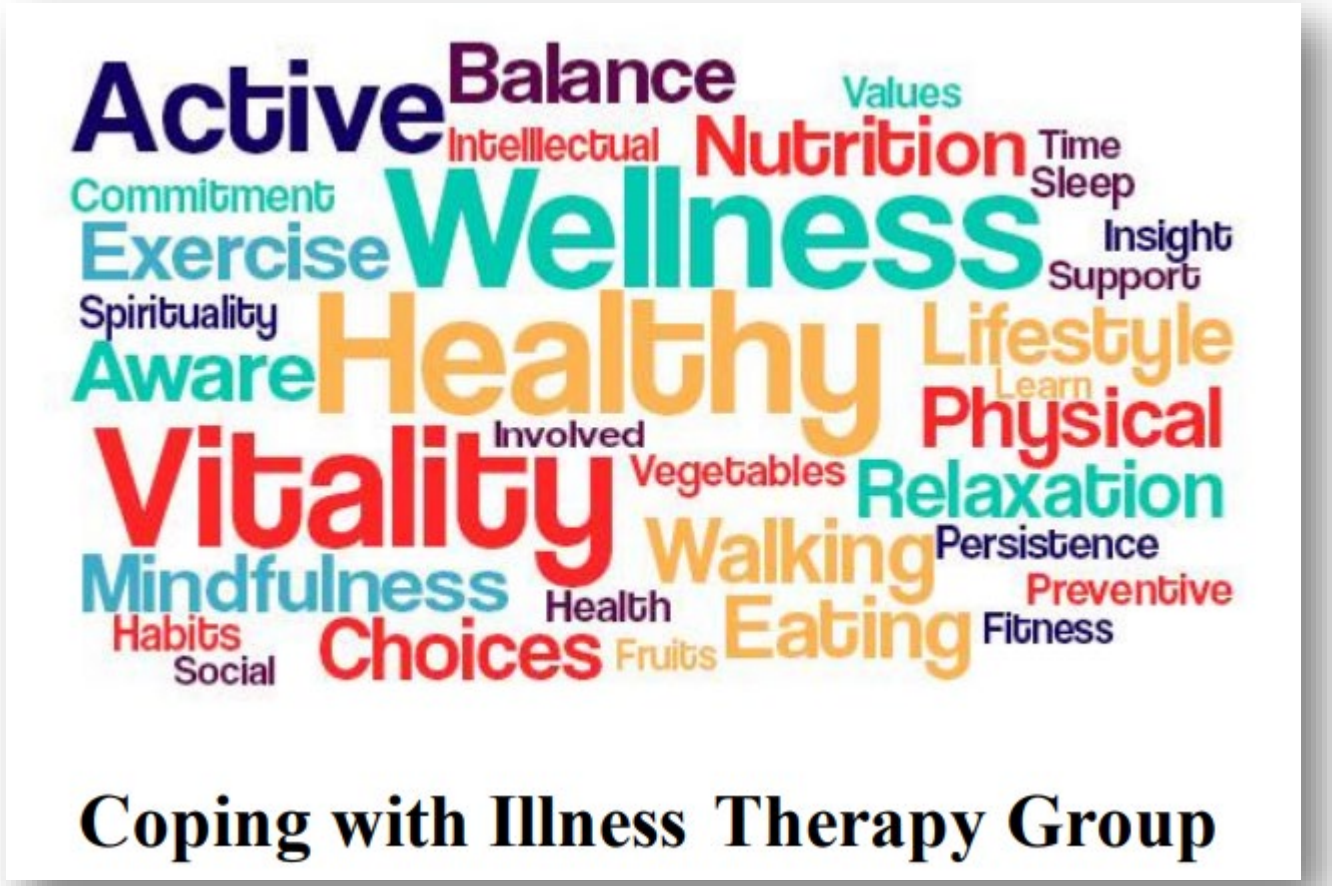
- Patients who are experiencing psychiatric symptoms or complications secondary to medical disorders or treatments such as endocrine disorders, neurological disease (ie. stroke, TBI, Parkinson's disease, dementia, multiple sclerosis), deep-brain stimulator surgery, HIV, transplant or cancer.
- Patients who may benefit from specialized psychopharmacological consultations such as medically complex or geriatric patients.
- Patients who are interested in participating in a 9-week psychoeducational and skill building group about coping with chronic medical illness or psychotherapy groups for COVID-19 survivors
- Post-ICU and post-COVID patients experiencing associated mental health difficulties including the need for cognitive screening
- Patients who would benefit from brief psychotherapy to address challenges associated with medical disorders or treatments such as:
  - Coping with and adjusting to new medical diagnoses
  - Coping with progression or complication of pre-existing medical conditions
  - Traumatic injuries (burn, spinal cord injury, etc.)
  - Medical trauma as a result of treatment for medical conditions

Who would *not* benefit?

- Patients who will need long-term psychiatric care exceeding 1-6 medication sessions or brief psychotherapy
- Patients seeking general psychiatric care
- Patients with high psychiatric case management needs or who require involuntary outpatient treatment
- Patients experiencing acute safety concerns that would be better served by emergency evaluation

Time-limited format (9 sessions) focused on skill-building and education

Curriculum Overview	
1: Chronic illness education, living with chronic illness, introduction to mindful breathing	6: Social support and connection, meditation practice
2: Values clarification, ongoing mindfulness practice	7: Trauma, resilience & gratitude in chronic illness, meditation practice
3: Emotion identification and problem solving, body scan practice	8: Meaning-centered living, meditation practice
4: "Unhelpful thoughts" intro, meditation practice	9: Final reflection and wrap-up
5: Communication in chronic illness, meditation practice	



Workbook and facilitator guide available for free download here

EASY
Effective Access and Support from psychiatrY
Healthcare Consultation Line

CoPPCAP
Colorado Pediatric Psychiatry
Consultation & Access Program

COLORADO
PROSPER
PERINATAL MENTAL HEALTH & SUBSTANCE USE
CONSULTING + ACCESS PROGRAM

Mission: To increase mental health identification and support strategies for primary and other healthcare providers. Increase provider-to-provider mental health consultation, education, and support services to frontline healthcare workers treating patients across the lifespan.

Contact Us: 1-888-910-0153 (call for consultation or resources) or COMAP@cuanschutz.edu

- CoPPCAP – info@coppcap.org
- EASY – easyconsultation@cuanschutz.edu
- PROSPER – prosper@ucdenver.edu

Things to remember:

- FREE service for medical providers & navigators (including BH providers)
- Support any provider in CO
- Payor blind (i.e. insurance status not a factor)
- Not taking over patient care
- Not an emergency service
- Grant and gift funded

CO-MAP Components

Psychiatric Consultation:

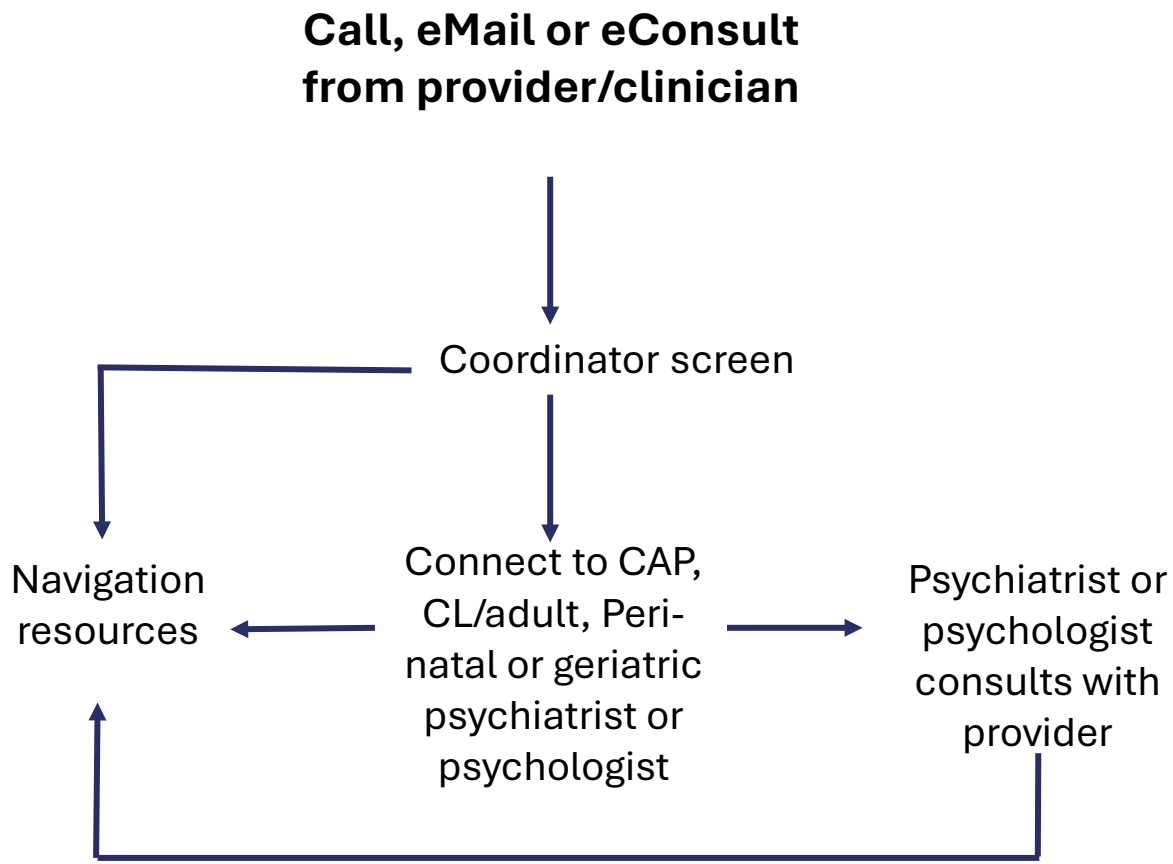
- Access line for free provider-to-provider consultation
- E-consults; asynchronous contact

Education:

- ECHOs & other educational forums
- Website/Toolkits for resources

Referral & Support:

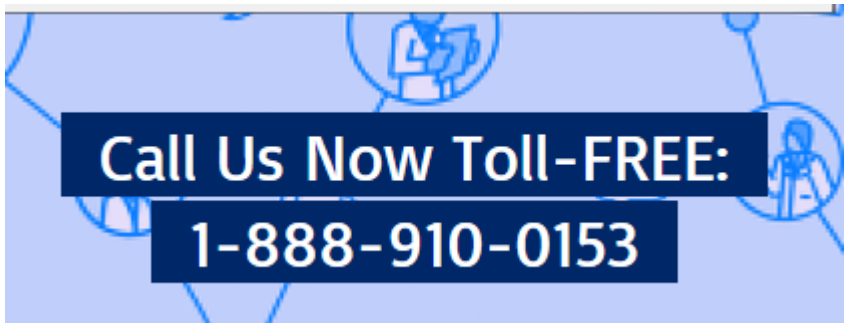
- Curated mental health resources & other community supports



University providers/team members with Epic access can also contact us via Epic!

- Send staff message with patient chart attached and consult question to "CO-MAP" inbasket pool

Non-UCH providers can contact us via our website consult form



In Summary

- Neuropsychiatric symptoms after stroke and TBI are common, can mimic primary psychiatric conditions and can include mood changes, anxiety, personality changes, agitation, psychosis

  Can have significant impact on the long-term outcome of both TBI & post-stroke patients
- A multidisciplinary and rehabilitative approach is important and should include families/caregivers
- When it comes to psychological considerations
  - Identity is shaped by personal experience and sociocultural context; brain injury can disrupt both how individuals see themselves and how they function within their social world.
  - Communication style, treatment plans, and therapy approaches need to be tailored to a patient's unique abilities and needs
- When it comes to medications:
  - "start low and go slow" but ensure adequate dosing and duration of medication trials
  - Minimize polypharmacy
- Providers can access curbside consultation through CO-MAP for medically complex patients or outreach the PCMC clinic if considering a referral

QUESTIONS?

CASES?

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Supplementary Slides

Class	Highlights	*DDI = drug-drug interaction
Selective serotonin reuptake inhibitors (SSRIs)		
Sertraline (Zoloft)	Tends to cause GI SE, relatively low risk of DDI	
Escitalopram (Lexapro)	Similar to citalopram, generally well tolerated, low risk of DDI, smaller dosing range*	
Citalopram (Celexa)	Low risk of DDI, more dosing restrictions, QTc (black box)	
Fluoxetine (Proxac)	Long half-life (helpful in intermittent adherence), high risk for DDI, can be activating	
Paroxetine (Paxil IR, CR)	High anticholinergic & antihistiminic burden (sedation, weight gain, dry mouth), short half-life (higher risk of discontinuation syndrome), high risk for DDI, not recommended in pregnancy, problematic in the elderly	
Fluvoxamine (Luvox)	Short half-life, not well tolerated, DDI	
Serotonin norepinephrine reuptake inhibitors (SNRIs)		
Venlafaxine (Effexor IR, XR)	Less sedating, adjunct in chronic pain, can be problematic in patients with HTN (inc BP & HR), IR formulation a/w more side effects and discontinuation syndrome	
Desvenlafaxine (Pristiq)	Similar to venlafaxine	
Duloxetine (Cymbalta)	Less sedating, FDA approved for fibromyalgia & DM related neuropathic pain, shorter half-life, increased risk of DDI	
Other		
Bupropion (Wellbutrin IR, SR, XL)	Increase seizure risk (IR/SR especially contraindicated in seizure, eating disorder), not recommended for anxiety disorders or depression with anxiety, no serotonin effect or sexual SE, XL supposed to be better tolerated, DA & NE effect	
Mirtazapine (Remeron)	Serotonin & NE effect, less risk of sexual SE, lower doses more a/w sedation/sleepiness, may be helpful in anxiety, has dissolvable form	

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