



It's Not Just Physical: Cognitive Work Capacity

Chairperson:

Karen Huyck, MD, PhD, MPH
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Occupational & Environmental
Medicine, Dartmouth Health
Medical Director, VT RETAIN,
Vermont Department of Labor

Tuesday, March 26th, 2024

1:30-2:20pm

slido



I feel confident documenting cognitive work modifications?

ⓘ Start presenting to display the poll results on this slide.



Cognitive Work Capabilities Form Overview

Karen Huyck, MD PhD MPH

Consider this common scenario of a significant concussion...

- Patient tells PCP they are ready to return to work after a few weeks of recovery
- PCP returns patient to full time full duty work without modifications
- Patient has flare of symptoms and is unable to do their job
- A functional interview would have identified (1) that work needed to be postponed a few weeks and (2) need for a transitional return to work plan with job modifications in place.
- A standardized method of documenting cognitive work ability would help guide the functional interview, inform job modifications, and prevent failed return to work
- Avoiding failed return to work increases the chance of future successful return to work

Cognitive Work Capabilities Form

2024

Work Related Injuries
Workshop

Providers caring for people with cognitive health conditions can rate executive function impairment by category and choose appropriate job modifications to support work.

COGNITIVE WORK CAPABILITIES FORM

This form is designed for medical providers to document work capabilities of patients with injuries or illnesses affecting cognitive function. To complete this form, use available information (e.g., from your interactions with the patient and information from the care team) to estimate the patient's work abilities.

Cognitive capabilities are divided into 3 categories: Cognition, Self-regulation, and Resilience. Rate performance in each category. Choose from the listed job modifications to help end users of this form, such as an employer, determine appropriate accommodations.

Patient's Name: _____ Date: _____

Please rate patient's ability on the following scale: **1 = no limitation; 2 = needs environmental modifications; 3 = needs close supervision or assistance; 4 = unable to perform despite close supervision or assistance**

If a category is rated mostly with 4's, consider whether to select any job modifications within that category because they may not promote ability to work.

Cognition	1	2	3	4
Remember simple instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remember complex instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand simple instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand complex instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out an individual task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out multiple tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make simple decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform complex decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain attention for extended periods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerate distraction in the work environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage time to be punctual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take appropriate precautions to workplace hazards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain an organized workstation or environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job modification(s) related to Cognition (choose all that apply):

Needs written work task available to remember instructions	<input type="checkbox"/>
Needs to take notes to remember details of non-routine work tasks	<input type="checkbox"/>
Requires supervised repetition to learn work tasks	<input type="checkbox"/>
New tasks should have limited steps with additional steps added only after initial sequence is performed independently	<input type="checkbox"/>
Work tasks should be isolated to one task at a time	<input type="checkbox"/>
Complex problem solving should not be required for any work tasks	<input type="checkbox"/>
Complex problem solving should not be required for new work tasks, but tasks that are practiced can involve complex problem solving	<input type="checkbox"/>
Needs assistance for complex problem solving	<input type="checkbox"/>
Need to limit to one computer monitor to decrease need for multitasking	<input type="checkbox"/>
Reminders, such as on a cell phone, are needed to manage time and maintain a schedule	<input type="checkbox"/>
Needs a more isolated work area to decrease auditory and visual distraction	<input type="checkbox"/>
Wear earplugs or earmuffs to decrease auditory distraction	<input type="checkbox"/>
Needs supervision to create and maintain organization within the work environment	<input type="checkbox"/>


Page 1 of 2

Cognitive work capabilities form use

Designed for the care team to efficiently document work capabilities of patients with injuries or illnesses affecting cognitive function such as:

- Post Acute COVID Syndrome
- Traumatic Brain Injury and concussion
- Cerebrovascular Accident
- Multiple Sclerosis
- Attention deficit disorders
- Mood disorders
- Cancer and symptoms associated with cancer treatment
- Post-Traumatic Stress Disorder
- Schizophrenia
- Obsessive compulsive disorder
- Mild dementia
- Sleep disorders
- Worker burnout
- Learning disabilities

Reasons to document cognitive work ability:

- Support ability to stay at or return to work
 - Facilitate a transitional return to work plan
 - Provide appropriate job modifications
 - Prevent failed return to work
 - Postpone return to work to increase chance of a future successful return to work
 - Document lack of work capacity
- 

Cognitive work capabilities form instructions

To complete:

1. Use available information to *estimate* work abilities
2. Cognitive capabilities are divided into 3 categories:
Cognition, Self-regulation, and Resilience
3. Rate performance in each category on a scale of 1 to 4 (no impairment to unable)
4. Based on performance deficits, choose from the list of job modifications to inform appropriate work accommodations

Cognitive work ability medical opinion

Available information to incorporate when estimating work abilities include:

- Interactions with the patient
- Objective findings and observations from your visits
- Diagnosis, imaging, and medical history
- Information from functional interview with patient
- Patient report of job duties, barriers to work, and needed supports
- Occupational history and job description (can use O*Net)
- Information from the care team and other providers
- Information from employer, case manager, vocational counselor, etc

Be aware of factors that can bias estimates of cognitive functions such as socioeconomic status, level of education, type of occupational, race and ethnicity, physical abilities, sex and gender, health status, age, etc.

Cognitive work ability preliminary validity testing

100% (9/9) of respondents said the form would help them provide work modifications for patients with cognitive impairment.

89% (8/9) of respondents found it easy to use and **79%** (7/9) were likely to use it in their practice.

Respondents liked that the form included job modifications in response to impairments and assessed capacities not currently captured by existing work capacity forms. Suggestions included to add a list of potential triggers in the work environment.



Return to Work with Cognitive Deficits after a Traumatic Brain Injury

Carol Dennehy RN CRRN CCM CLCP
Director of Case Management
Occupational Resource Network

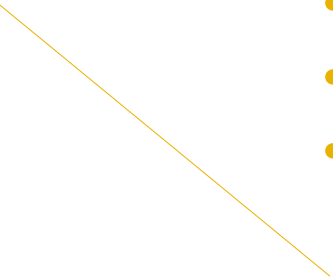
Case Study

- 57 year-old electrician fell 15 feet from a ladder
- Sustained a severe traumatic brain injury
- Found to have subarachnoid and subdural hematomas and left temporal and parietal skull fractures extending into the auditory canal.
- MRI showed DIA (diffuse axonal injury)
- Required intubation and a g-tube
- Remained at acute hospital for 38 days and then transferred to rehab for 3 weeks

Case study (continued)

- Made good gains in functional mobility but had significant cognitive deficits including decreased insight, recall, short term memory, and attention
- Attended outpatient physical, occupational, and speech therapy
- Over the next 4 months made good progress, although continued with balance issues and decreased insight, recall, memory, and attention
- Required a driving evaluation before return to work
- Completed work conditioning
- Returned to work 11 months after injury

What case management strategies can you use to facilitate return to work with cognitive symptoms from traumatic brain injury?

- insight
 - recall
 - short term memory
 - attention
- 

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What case management strategies can you use to facilitate return to work with cognitive symptoms from traumatic brain injury?

ⓘ Start presenting to display the poll results on this slide.

Return to work considerations

- Discuss return to work with the employer as early as possible
- Identify any concerns from the employer
- Identify the job requirements
- Physical deficits versus cognitive deficits
- Physical demand versus cognitive demand
- Educate the employer regarding cognitive deficits as they are not visible

Return to work with cognitive deficits

- Discuss with the treating clinician(s) having the injured worker perform tasks at home to increase activity level and identify strategies to accommodate for cognitive deficits
- Work with the treatment team to determine physical and cognitive job modifications
- Encourage slow transitional approach to allow the body to reacclimate to work
- Discuss needed job modifications such as:
 - Transitional return to work due to fatigue – starting with half days
 - Discuss cognitive deficits and how those translate into functional tasks
- Individuals with cognitive deficits do well with structure, repetition, and routine

Return to work is possible with cognitive deficits!



Cognitive Work Capacity: Long Covid Case

Dean Hashimoto, MD, JD

Senior Vice President of Workplace
Health, Mass General Brigham

Professor of Law, Boston College

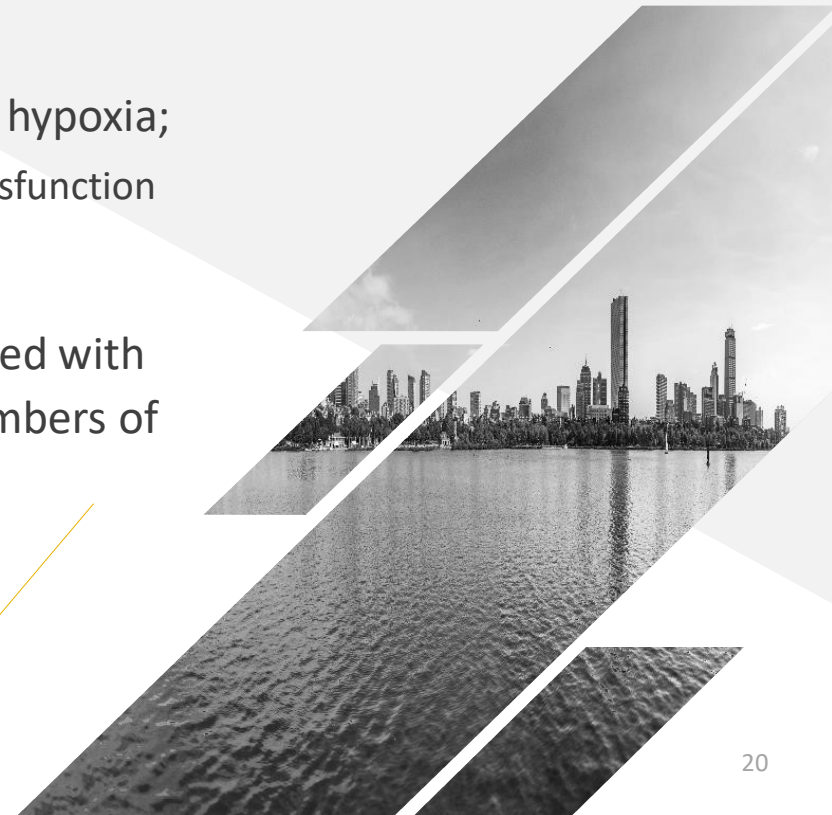
Long Covid and Cognitive Impairment

- “Cognitive Covid “
 - Most common: brain fog (cognitive slowing) with fatigue
 - May also include other cognitive symptoms such as memory loss, concentration deficit, executive functioning deficit
 - Often with sleep difficulties, anxiety, and depression
 - Risk factors: hospitalization from Covid, increased age, high BMI, female gender
- **WHO definition**:
 - Developing within 3 months of an initial Covid infection, lasting at least 2 months, and cannot be explained by an alternative diagnosis.
 - Varying prevalence: 15-80% depending on type and timing of study; contexts; reliance on self-report vs. cognitive and neuropsych testing



Pathophysiology of injury is not well-understood

- Common explanation: Inflammatory cell infiltration of the cerebellum and brainstem with systemic inflammation and hypoxia;
 - Also microhemorrhages, microglial activation, mitochondrial dysfunction
- Association with **depression and anxiety**
- Reported impairments and symptoms are not well-correlated with cognitive testing results that are likely to reveal greater numbers of those with cognitive impairments



Long Covid Case Study

- **Main impairment = cognitive slowing and fatigue**
- 40 y.o. primary care physician who had substantial infection that required missing work for 6 weeks including 2 weeks of acute infection not requiring hospitalization and 4 weeks of a feeling of brain fog, lingering headaches, fatigue, difficulty sleeping, anxiety, and depression.
- RTW for 3 months duration at time when all medical providers associated with his department were working remotely. **Worked 3 days per week and saw 6-8 patients per day session. He did not take his regular call.**
- Now with the pandemic receding, his clinical group is returning to work on-site and needs to have him resume off-hours paging coverage. He brings a doctor's note that is consistent with the following cognitive work capabilities form:



- **COGNITIVE WORK CAPABILITIES FORM:** Please rate patient's ability on the following scale: 1 = no limitation; 2 = needs environmental modifications; 3 = needs close supervision or assistance; 4 = unable to perform despite close supervision or assistance
- Resilience:
 - Work with time pressure: 2
 - Manage daily work demands: 2
 - Maintain regular attendance: 2
- Job modification(s) related to Resilience:
 - Working under time pressure should be limited: Limit to 6 patients per daily session
 - Rest breaks are needed. Please specify: Needs 15 minute break between patients
 - Unable to work consecutive shifts or needs alternate days off: Limited to 3 days per week
 - Please specify: Need to limit certain shifts such as day shifts, night shifts, or on-call shifts: **No on-call**
 - Please specify: Unable to tolerate overtime
 - Any other job modification recommendations not listed above: **Needs to work remotely with virtual patient visits only**

COGNITIVE WORK CAPABILITIES FORM

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If a category is rated mostly with 4's, consider whether to select any job modifications within that category because they may not promote ability to work.

Cognition	1	2	3	4
Remember simple instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remember complex instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand simple instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand complex instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out an individual task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out multiple tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make simple decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform complex decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain attention for extended periods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerate distraction in the work environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage time to be punctual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take appropriate precautions to workplace hazards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain an organized workstation or environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job modifications related to Cognition (choose all that apply):

Needs written work task available to remember instructions	<input type="checkbox"/>
Needs to take notes to remember details of non-routine work tasks	<input type="checkbox"/>
Requires supervised repetition to learn work tasks	<input type="checkbox"/>
New tasks should have limited steps with additional steps added only after initial sequence is performed independently	<input type="checkbox"/>
Work tasks should be isolated to one task at a time	<input type="checkbox"/>
Complex problem solving should not be required for any work tasks	<input type="checkbox"/>
Complex problem solving should not be required for new work tasks, but tasks that are practiced can involve complex problem solving	<input type="checkbox"/>
Needs assistance for complex problem solving	<input type="checkbox"/>
Need to limit to one computer monitor to decrease need for multitasking	<input type="checkbox"/>
Reminders, such as on a cell phone, are needed to manage time and maintain a schedule	<input type="checkbox"/>
Needs a more isolated work area to decrease auditory and visual distraction	<input type="checkbox"/>
Wear earplugs or earmuffs to decrease auditory distraction	<input type="checkbox"/>
Needs supervision to create and maintain organization within the work environment	<input type="checkbox"/>

Page 1 of 2

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Is it workers' comp?

ⓘ Start presenting to display the poll results on this slide.

Issues:

- If this is a WC case, is it helpful to obtain an IME?
- If this is not a WC case, would it be difficult for the employer to challenge the degree of disability and the need for further accommodations?
- What is the value of neuropsych and cognitive testing?
- How helpful is the Cognitive Work Capabilities form?
- If the employer/insurer is unable to successfully challenge the WC claim based on presence of injury, causality, or degree of disability, then what measures should the employer take to ensure that the workplace accommodations are necessary and appropriate?



Outcome:

- Employer did not challenge his request for accommodations.
- Employee continued to work remotely on a limited schedule for 6 additional months before returning back to his regular work when his impairment and symptoms disappeared.



References:

- F Ceban, S Ling, LMW Lui, et al. *Fatigue and cognitive impairment in post-covid-19 syndrome: a systematic review and meta-analysis*. Brain, Behavior, and Immunity 101(2022)93-135.
- SH Gulick, S Mandel, EA Maitz, et al. *Cognitive screening after covid-19*. May 2021 Practical Neurology 19-22.
- KW Miskowiak, JK Pedersen, DV Gunnarsson, et al. *Cognitive impairments among patients in a long-covid clinic: prevalence, pattern and relation to illness severity work function and quality of life*. Journal of Affective Disorders 324 (2023) 162-169.
- Z Li, Z Zhang, Z Zhang, et al. *Cognitive impairment after long covid-19: current evidence and perspectives*. Frontiers in Neurology 10.3389/fneur. 2023.1239182.



Cognitive work capacity Case study: **Generalized Anxiety Disorder**

Steven P. Dickens, MA
Director of Research
Invest EAP Centers for Wellbeing

Anxiety Disorder

Case Study*

- Responsible for creating invoices for customers
- Process bills from vendors
- Oversee review of monthly balances across departments
- Maintain organized financial records of invoices

Jane: Billing Clerk



**Confidentiality Disclaimer: Not a real person – an amalgam of several cases*

Work Environment

- Office shared with many others
- Fairly noisy at times
- Work hours are 9 am – 5:30 pm M-F



Anxiety

Influencing factors

Exacerbating Factors

- Single mom worried about young son home alone from 3:30 – 6:00 pm
- Excessive noise in environment
- Being around other people

Calming Factors

- Quiet
- Company of her dog



Cognitive impacts

- Difficulty maintaining sustained focus when distractions present
- Difficulty with short-term memory, especially relate to complex tasks with multiple steps



Cognitive Work Capabilities Form p. 1

Coding:

- 1: No limitation
- 2: Needs environmental modifications
- 3: Needs close supervision of assistance
- 4: Unable to perform despite close supervision or assistance

Cognition	1	2	3	4
Remember simple instructions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remember complex instructions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand simple instructions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand complex instructions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out an individual task	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry out multiple tasks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make simple decisions	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform complex decision making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain attention for extended periods	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerate distraction in the work environment	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage time to be punctual	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take appropriate precautions to workplace hazards	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain an organized workstation or environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job modification(s) related to Cognition (choose all that apply):	
Needs written work task available to remember instructions	<input checked="" type="checkbox"/>
Needs to take notes to remember details of non-routine work tasks	<input type="checkbox"/>
Requires supervised repetition to learn work tasks	<input type="checkbox"/>
New tasks should have limited steps with additional steps added only after initial sequence is performed independently	<input type="checkbox"/>
Work tasks should be isolated to one task at a time	<input type="checkbox"/>
Complex problem solving should not be required for any work tasks	<input type="checkbox"/>
Complex problem solving should not be required for new work tasks, but tasks that are practiced can involve complex problem solving	<input type="checkbox"/>
Needs assistance for complex problem solving	<input type="checkbox"/>
Need to limit to one computer monitor to decrease need for multitasking	<input type="checkbox"/>
Reminders, such as on a cell phone, are needed to manage time and maintain a schedule	<input type="checkbox"/>
Needs a more isolated work area to decrease auditory and visual distraction	<input checked="" type="checkbox"/>
Wear earplugs or earmuffs to decrease auditory distraction	<input type="checkbox"/>
Needs supervision to create and maintain organization within the work environment	<input type="checkbox"/>

Cognitive Work Capabilities Form p. 2

Self-regulation	1	2	3	4
Able to interact with the general public	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Able to interact with coworkers or peers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responsive to feedback from supervisors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Able to request assistance when needed	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complete work without interruptions from psychological symptoms	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adhere to basic hygiene and cleanliness standards	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job modification(s) related to Self-Regulation (choose all that apply):				
Working with the general public should not be an essential job function				<input type="checkbox"/>
Direct interaction should be with a limited number of coworkers				<input type="checkbox"/>
Employer performance feedback should be provided in writing at scheduled intervals				<input type="checkbox"/>
Needs to work with a team member for a majority of the day to compensate for limited ability to ask for assistance				<input type="checkbox"/>
Needs supervision with adhering to company hygiene/dress standards				<input type="checkbox"/>

Resilience	1	2	3	4
Respond flexibly to changes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make and adjust plans independently	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work with time pressure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage daily work demands	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain regular attendance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learn from adverse events.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job modification(s) related to Resilience (choose all that apply):				
Needs check-in from a supervisor to help process adverse events				<input type="checkbox"/>
Needs check-in from supervisor to help process change in the work routine				<input type="checkbox"/>
Working under time pressure should be limited				<input type="checkbox"/>
Rest breaks are needed. Please specify: _____				<input type="checkbox"/>
Unable to work consecutive shifts or needs alternate days off Please specify: _____				<input type="checkbox"/>
Need to limit certain shifts such as day shifts, night shifts, or on-call shifts Please specify: _____				<input type="checkbox"/>
Unable to tolerate overtime				<input type="checkbox"/>

Any other job modification recommendations not listed above:

Put an X in the box to mark the appropriate cognitive work capability level.	
Can work without restrictions	<input type="checkbox"/>
Modified hours required: Can work _____ hours per day _____ days per week	<input type="checkbox"/>
Requires job modifications other than limited hours of work	<input checked="" type="checkbox"/>
Does not have a cognitive work capability	<input type="checkbox"/>
Cognitive work capability will be reassessed on date: _____	<input type="checkbox"/>

Worksite Accommodations

Suggestions?

- A. Shift change. Work 2nd shift when fewer employees in building.
- B. Paint the office walls blue, known to be a calming color.
- C. Adopt an EAP that provides free, confidential counseling to all employees



Anxiety Disorder

Worksite Accommodations

- Modified schedule: 7 am – 2:30 pm
- Remote work from 3-5 pm
- Support dog
- Desk location temporarily changed
- Check-list of all procedural flows
- Company added a robust EAP to create psychologically healthy, supportive workplace
 - Strategic plan
 - Regular manager/employee training workshops
 - Supervision; supporting fellow workers; dealing with difficult people
 - Annual benchmarking assessments





DOWNLOAD COG FORM HERE

Consider cognitive work modifications to support return to work

The Cognitive Work Ability Form can facilitate employment for patients with diverse cognitive components to a work-limiting health condition



Questions?