AMERICAN COLLEGE OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

Workplace Mental Health: Introduction

Effective October 1, 2025

TABLE OF CONTENTS

SUMMARY OF RECOMMENDATIONS

The following summary table contains evidence-based recommendations for evaluating and managing workplace mental health from the Workplace Mental Health Panel. These recommendations are based on critically appraised higher quality research evidence or, when such evidence was unavailable or inconsistent, on expert consensus as required in ACOEM's Methodology. Recommendations are made under the following categories:

- Strongly Recommended, "A" Level
- Moderately Recommended, "B" Level
- Recommended, "C" Level
- Insufficient – Recommended (Consensus-based), "I" Level
- Insufficient – No Recommendation (Consensus-based), "I" Level
- Insufficient – Not Recommended (Consensus-based), "I" Level
- Not Recommended, "C" Level
- Moderately Not Recommended, "B" Level
- Strongly Not Recommended, "A" Level

Category	Intervention	Evidence
Return to Work	Early Return-to-Work Programs for Mental Health Disorders	Recommended, Insufficient Evidence (I)

WORKFLOW

Algorithm 1. Flow Diagram for Patients with Medical and/or Mental Health Conditions

INTRODUCTION

The Workplace Mental Health Guideline is designed to provide clinicians (the primary target users of this guideline) with evidence-based guidance on the evaluation and treatment of working-age adults who have mental and behavioral health disorders (hereafter mental health disorders) impacting on and/or arising from the workplace. This guideline addresses a general approach to the evaluation and management of patients with workplace mental health disorders, particularly including guidance for select disorders of relevance to the working population (e.g., major depressive disorder [MDD], anxiety disorders, and posttraumatic stress disorder [PTSD], while also addressing workplace stress, which is not a mental health condition).

Some mental health disorders may be associated with or follow workplace events. For example, after a work-related injury or trauma, a patient may develop depression, anxiety, post-traumatic stress disorder, or other psychological conditions. In other cases, a mental health disorder may be related to events or biological processes unrelated to work. In this

case, even though these conditions are not due to workplace events, they may impact a patient's fitness for duty.

Despite the stigma that "mental health disorders" may carry, patients with serious mental illness may be highly functional in the workplace. For example, a mathematician with paranoid schizophrenia won the Nobel Prize, and a professor of animal science with autism performed such revolutionary work that she was named to Time's 100 most influential people in the world [1,2]. Although conditions such as autism or schizophrenia cannot be caused by workplace events, they may impact workplace performance. Those who have these conditions may require accommodations to be successful.

It is recognized that there are significant differences between and among the various states' and federal systems, and these differences are often considerably more pronounced among mental health disorders than other disorders [3]. There also are regional differences in treatment approaches [4,5,6,7,8,9,10,11]. This guideline does not attempt to address those differences.

The objectives of this guideline are to provide evaluations of diagnostic tools, screening tools, allied health interventions, medications, and psychotherapies. The comparative effectiveness of various treatment options is addressed where research is available:

- What evidence supports the initial assessment and diagnostic approach? Screening tools? Diagnostic tools?
- What red flags signify potentially serious underlying condition(s)?
- What initial treatment approaches have evidence of efficacy?
- What is the evidence of work-relatedness for various diagnoses?
- What modified duty, cognitive or psychotherapeutic homework activity prescriptions (e.g., problem solving games), and/or limitations are effective and recommended?
- When is it acceptable to return the individual to work?
- When initial treatment options fail, what evidence supports other interventions?
- When and for what conditions are invasive procedures recommended?
- When and for what conditions is surgery recommended?
- What management options are recommended for delayed recovery?
- What evidence of efficacy is available for psychological and behavioral interventions for workplace mental health conditions?

In accordance with the IOM's Trustworthy Guidelines, detailed records are kept, including responses to external peer reviewers [12]. Recommendations on assessing and treating adults with workplace mental health disorders are presented herein.

GUIDELINE MODULES

The guideline is constructed of the following modules, which address one or more specific conditions:

- Posttraumatic Stress Disorder and Acute Stress Disorder
- Depressive Disorders
- Anxiety Disorders

THE BIOPSYCHOSOCIAL MODEL

The ACOEM guidelines adopt the biopsychosocial model, which integrates the biological, psychological, and social aspects of a patient's condition into a unified whole (see Figure 1).

The biopsychosocial model was initially conceived as a new model for medicine, which could provide a means of integrating the biological aspects disease and illness with its psychological and social aspects. It was hoped that this new model could provide, "…a blueprint for research, a framework for teaching, and a design for action in the real world of health care" [13]. Since its inception, the biopsychosocial model has spawned a wealth of research and practice models, and is the model adapted into this guideline. At the same time, the biopsychosocial model itself is often presented as vague philosophical abstraction. One attempt to define the biopsychosocial model with greater specificity is the Vortex Paradigm [14,15,16]. This paradigm conceptualizes intractable medical conditions such as chronic pain as being precipitated by the cumulative effect of biological, psychological and social risk factors. The Vortex Paradigm suggests numerous falsifiable hypotheses that can be tested by multivariate methods. In a manner similar to the way heart disease can be predicted by a multivariate equation that includes cholesterol, age, blood pressure, diabetes, genetics etc., the Vortex Paradigm would predict that return to function following injury can be predicted by a multivariate equation that includes biological severity, MDD, catastrophizing, drug abuse, personality disorder, job dissatisfaction, childhood trauma, secondary gain, etc. In the clinical setting, the Vortex Paradigm would posit that biological, psychological and social variables may all contribute to the onset of an injury or illness. Once present, a significant biological condition may have direct psychological and social consequences, and these may interact with the patient's pre-existing biological, psychological and social strengths and vulnerabilities. As the level of biopsychosocial risk factors increases, the risk of decompensation (a "downward spiral") into an intractable chronic condition increases. When the patient presents to the physician, all of these variables are present, and a treatment plan should be developed regarding how to either actively treat or manage these concerns, to prevent them from delaying recovery.

IMPACT

More than 59.3 million adults (23.1% of U.S. adults) ages 18 or older in the United States have some form of mental illness [17] not including developmental or substance use disorders. Of those, 15.4 million (26.0% of U.S. adults) experienced a serious mental illness in the prior year. The 18- to 25-year-old demographic had the highest prevalence of serious mental illness at 11.6%. Alcohol use disorder is also high, affecting an estimated 28.1 million of those 18 years and older in the past year [18]. Substance use disorder affected 48.7 million (17.3%) of those 12 years and older in the past year [19]. Of those with serious mental illness, only 66.7% received mental health treatment [17].

According to the World Health Organization, mental health disorders are the most disabling of all global nonfatal diseases (injuries, musculoskeletal diseases, non-communicable diseases, and non-fatal communicable, maternal, perinatal and nutritional conditions), accounting for 31% of the world general population's disability [20,21]. One in 6 years lived with disability globally are due to mental disorders [22]. Among mental health disorders,

MDD/depressive and anxiety disorders are the most disabling conditions. In 2018, approximately 25% of adults visited or consulted a mental health professional [23].

There were more than 49,000 suicide deaths in the United States in 2022, while 13.2 million people seriously thought about suicide, 3.8 million people made a plan for suicide, and 1.6 million people attempted suicide. The suicide rate for males is 3.9-fold that of women [23]. Homicide-suicide accounts for only 1/50th to 1/10th of the US suicide rate [24]. Risk factors for suicide include depressive disorders, (11.0-fold risk) PTSD, anxiety disorders (2.5-fold risk), any mental disorder (13.1-fold risk), any personality disorder (6.8-fold risk), history of self-harm (10.1-fold risk), relationship conflicts (5.0-fold risk), social isolation (4.0-fold risk), legal problems (4.8-fold risk), family-related conflict (4.5-fold risk), work/school-related conflict (1.8-fold risk), unemployment (3.8-fold risk), and bereavement (1.2-fold risk, not statistically significant). [25,26] One study reported a prevalence of homicide-suicide ideation of 4.4% in patients in treatment for chronic pain [24]. Another study compared the prevalence of five forms of suicidal ideation observed in acute pain patients, chronic pain patients vs healthy community controls. Compared to the community control group where suicidal ideation was reported by 1.66%, the relative risk of having a plan for suicide was 4.26 for patients undergoing medical treatment with acute pain (7.06%), 4.78 for patients in medical treatment with chronic pain (7.92%), and 7.06 for worker compensation patients in medical treatment with chronic pain (11.69%) [27]. From 2003 to 2014, 8.8% of approximately 120,000 suicide decedents had chronic pain [28].

The global costs of mental health were calculated at $5 trillion per year as of 2019 [29]. This cost is higher than diabetes mellitus, respiratory disorders, and cancers combined.

U.S. national expenditures for mental healthcare in 2019 totaled $106.5 billion, 41.5% of which was for ambulatory visits [30]. Total treatment-related spending for both mental health and substance use disorders totaled an estimated $280.5 billion in 2020 [31]. When combined with lost earnings capacity and public disability insurance payments associated with mental illness, mental health disorders cost the U.S. $467 billion per year as of 2012 [32], which was approximately 3% of the US GDP of $16.155 trillion [33]. The direct and indirect costs of mental health disorders are thought to exceed 4% of GDP [34]. These figures are projected to grow based on CMS data [35].

BASIC PRINCIPLES AND DEFINITIONS

Acute Pain: Pain of 1 month or less duration. Pain lasting >1 month but <3 months is termed "subacute."

Acute Stress Disorder: Acute stress disorder is defined [36] as exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:

1. Directly experiencing the traumatic event(s).
2. Witnessing, in person, the event(s) as it occurred to others.
3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.

4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse). (This criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.)

Acute stress disorder requires the presence of nine (or more) of the following symptoms from any of the five categories (intrusion, negative mood, dissociation, avoidance, and arousal) associated with the traumatic event(s), beginning after the traumatic event(s) occurred:

1. Intrusion symptoms
   - Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
   - Recurrent distressing dreams in which the content or affect of the dream is related to the traumatic event(s).
   - Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event was recurring. Most-extreme expression may be complete loss of awareness of present surroundings.
   - Intense or prolonged psychological distress or marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the event(s)
2. Negative mood
   - Persistent inability to experience positive emotions - e.g., happiness, satisfaction, loving feelings
3. Dissociative symptoms
   - Altered sense of the reality of one's surroundings or oneself - e.g., seeing oneself from another's perspective, being in a daze, time slowing
   - Inability to remember an important aspect of the event(s), typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs
4. Avoidance symptoms
   - Efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the event(s)
   - Efforts to avoid external reminders (people places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the event(s)
5. Arousal symptoms
   - Sleep disturbance - e.g., difficulty falling or staying asleep, restless sleep
   - Irritable behavior and angry outbursts (with little or no provocation), typically expressed as verbal or physical aggression toward people or objects
   - Hypervigilence
   - Problems with concentration
   - Exaggerated startle response

Symptoms typically begin immediately after the trauma exposure but must persist for 3 or more days and up to one month. The disturbance should cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. The disturbance should not be attributable to the physiological effects of a substance (e.g.,

medication or alcohol) or another medical condition (e.g., mild TBI) or be better explained by a brief psychotic disorder [36].

Adverse Childhood Experience (ACE): ACE is defined as incidents associated with mental health outcomes and numerous risk behaviors during the first 18 years of life [37,38]. Incidents include parental separation or divorce, exposure to substance abuse, violent treatment of mother or stepmother [39], sexual abuse, physical abuse, [38] and verbal abuse [37]. ACE may affect a person's emotional, social, and cognitive function [40].

Advocagenesis: Influences that are conscious or unwitting influences of lawyers and/or litigation processes on patients, including injured workers, that make the clinical presentation foment, worse, prolonged, or in some other manner, worse than would otherwise be [41].

Examples of these influences include:

- pointing out to the patient the financial benefits of reporting symptoms such as pain or cognitive problems [42],
- overt manufacture of symptoms,
- instructions from legal counsel to misstate facts, and
- instructions to not comply with treatment.

Advocagenesis has some parallels with iatrogenesis.

Alexithymia: Alexithymia is a personality trait [43] that is a multi-dimensional concept [44]. Individuals with alexithymia tend to be operational thinkers and have difficulties in distinguishing, identifying, and/or describing emotions [43,44]. Individuals also tend to lack in imagination and fantasy [45]. Alexithymic patients may fail to perceive emotions, and instead recognize only the physiological correlates of the emotions. For example, an alexithymic patient who was having shortness of breath might be convinced that it was an asthma attack, not recognizing the emotional causality.

Alternative Therapy: This term is sometimes used to describe a specific type of treatment that emphasizes the interrelationship between mind, body, and spirit [46]. Often implemented to help patients cope with fatigue, insomnia, anxiety disorders, and stressors. Alternative therapies may or may not have an evidence base.

Anxiety: Anxiety is a common symptom that occurs when an individual worries about thoughts, events, or circumstances. Anxiety is not a diagnosis, but rather a common symptom; it becomes a disorder when symptoms become chronic and interfere with daily living and functions. Anxiety disorders "differ from developmentally normative fear or anxiety by being excessive or persisting beyond developmentally appropriate periods" [36]. Anxiety disorders include generalized anxiety disorder, panic disorder, social phobias, and other phobias.

While ICD-10 / DSM-IV also categorize obsessive-compulsive disorder and posttraumatic stress disorder as anxiety disorders, DSM-5-TR does not. DSM-5-TR categorizes PTSD as a

trauma or stressor related disorder, while obsessive-compulsive disorder is in its own category.

Symptoms include muscle tension, physical weakness, poor memory, sweaty hands, fear, palpitations, poor concentration, and upset stomach [47]. Potential treatments include cognitive-behavioral therapy, exercise, relaxation techniques, mindfulness-based stress reduction, biofeedback to control muscle tension, and medication [48].

Behavioral Therapy: Focuses specifically on modifying problematic behaviors. Behavioral therapy uses specific techniques to modify behavior such as, positive and negative reinforcement; behavioral changes, thought and behavioral chain analysis, negative thought substitution, and daily affirmations [48].

Bodily Distress Disorders: The diagnostic criteria for bodily stress disorder emphasize excessive attention and continued seeking of care despite reassurance. This is an ICD-11† construct which replaces DSM-IV Somatoform disorders and offers an alternative to DSM-5-TR's diagnostic conceptualization of mind-body disorders. By contrast, somatoform disorders are based on the professional's judgment that physical symptoms are medically unexplained, and somatic symptom disorders involve a real or perceived disease that is associated with distorted cognitions or excessive anxiety.

Bipolar Disorders: Considered types of mood disorder, bipolar disorders (Bipolar I disorder, Bipolar II disorder, cyclothymic disorder), are sometimes also called "manic depression," and are characterized by mood swings. Bipolar I is considered classic manic-depressive disorder, although requiring neither an episode of major depression nor an episode of psychosis. Bipolar II is similar, but requires at least one lifetime episode of major depressive episode and at least one hypomanic episode but no history of mania. The DSM-5-TR criteria for cyclothymic disorder are met if there is at least 2 years of both hypomani and depressive episodes without fulfilling the criteria for mania, hypomania or depression [36].

Chronic Pain: Pain lasting more than 3 months.

Cognitive-Behavioral Therapy: Short-term, goal-oriented psychotherapy treatment that takes a hands-on, practical approach to problem solving. CBT works by attempting to change the patient's attitudes and his / her behavior by focusing on the thoughts being held [49].

Complex Post-Traumatic Stress Disorder (c-PTSD or CPTSD): A mental disorder that develops after experiencing repeated or prolonged trauma, often in the context of interpersonal relationships.

Delayed Recovery: An increase in the period of time prior to returning to work or usual activities compared with the length of time expected based on reasonable expectations, severity of disorder, age, and treatments provided.

Depressive Disorders and Major Depressive Disorder (MDD): A symptom category of low mood disorders in the DSM-5-TR that includes disorder(s) classified as a type of depressive disorder. "The common feature of these disorders in the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function" [36]. It has some overlap with the ICD10/DSM-IV category of (ICD10 / DSM-IV) which is characterized by sadness, isolation, or despair, more properly referred to as dysthymia.

As with anxiety, depression is not a psychiatric diagnosis but rather a symptom; it may become a disorder when symptoms become chronic and interfere with daily living and functions. Included in this group of psychiatric conditions are major depressive disorder, persistent depressive disorder (dysthymic disorder), and other conditions characterized by dysphoria.

Electroconvulsive Therapy: The transcranial administration of an electrical stimulus to induce electrical evidence of seizure activity in the brain to treat severe psychiatric conditions.

Factitious Disorder (aka Munchhausen syndrome): A mental disorder wherein the patient either falsifies or self-induces symptoms of illness. It is thought to involve both conscious and non-conscious factors. The primary drive is thought to be assuming the role of being a patient or being sick.

DSM-5-TR notes that patients with this disorder may seek medical tests or treatments out of a compulsion that resembles that seen in binge eating or kleptomania. "The deceptive behavior is evident even in the absence of obvious external rewards" [36]. By definition, factitious disorder is not occupational. If the falsification is driven by external reward or secondary gain, it is not factitious and instead is termed malingering.

Functional Improvement (especially Objective Evidence): Functional improvement is the measurement and tracking of progress towards meeting treatment goals, both mental, behavioral, and physical health-related, that are functionally relevant. Examples include increases in, or resumption of normal mental functions, behavioral functions, job specific activities, return to work, return from off-duty-status to modified duty, participation in progressive behavioral therapy, cognitive therapy, and other activities of daily living. Validated tool(s) may also help track progress, although they are subjective. Objective improvements on cognitive function testing and attention tests may be physical examination correlates of improved function.

Functional Restoration: This term is often used for a variant of interdisciplinary pain alleviation or at least amelioration characterized by objective measurement of physical function, intensive graded exercise and multi-modal pain/disability management with both psychological and case management features [50,51,52,53,54,55]. The term is not generally used in mental health outside of chronic pain (see Chronic Pain Guideline).

Hypomanic Episode: Like a manic episode, but less intense and usually of shorter duration, but must be at least 4 days in length. The combination of at least one hypomanic episode and at least one major depressive episode is required to make the diagnosis of bipolar II disorder [(36)].

Magnetic Resonance Imaging (MRI): Medical imaging technique used in radiology to visualize internal structures using magnetic radiation and magnetic fields. MRI will provide a 3-dimensional view of internal body organs, allowing soft-tissue differentiation [(56)].

Major Depressive Disorder: Major depressive disorder is a psychiatric condition classified as a depressive disorder in the DSM-5-TR, and as type of mood disorder in the ICD10/DSM-IV. "The diagnostic code for major depressive disorder is based on whether this is a single or recurrent episode, current severity, presence of psychotic features, and remission status."

Major Depressive Episode: A major depressive episode lasts for a period of at least 2 weeks during which there is either depressed mood or the loss of interest in nearly all activities [(36)]. Additional criteria may include, among others: changes in appetite, changes in sleep patterns, guilt, and suicidal ideation.

Malingering: Feigning is the fabrication or gross exaggeration of psychological or physical symptoms. Malingering is the fabrication or gross exaggeration of psychological or physical symptoms for secondary gain. As the most common purposes of malingering are for financial incentives and/or disability, it is not uncommon in worker's compensation settings. Other purposes of malingering include the attainment of prescriptions including opioids, obtaining disability benefits, insurance payouts, avoidance of work, tasks, chores, military service, school and/or other external demands.

Malingering is difficult to prove because it requires proving why the person exaggerated. If the exaggeration was for primary gain, then the definition is met for a factitious disorder. The medical treatment - not money - is intrinsically rewarding. "I faked the symptoms because I enjoy being a surgery patient and having scars, and I love having RNs care for me when I get nausea after anesthesia." Tertiary gain is seldom considered but it is faking for altruistic reasons and the patient gets nothing. "I will lie about this because the outcome will be good for the planet."

Psychological tests can detect feigning, but generally cannot establish the motive for the exaggeration. DSM-5-TR provides guidance on situations where malingering may occur. This includes ruling out other psychological diagnoses, and the identification of either antisocial personality disorder or several other personality disorders. The DSM-5-TR also notes that in instances of medicolegal settings/concerns, that the professional should consider the possibility of malingering. Because it is a behavior, there is no DSM-5-TR diagnosis for malingering and it is not medically treated.

Manic Episode: A manic episode is defined [36] as a period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increased activity or energy, lasting at least 1 week and present most of the day, nearly every day (or any duration if hospitalization is necessary). During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms (four if the mood is only irritable) are present to a significant degree and represent a noticeable change from usual behavior:

1. Inflated self-esteem or grandiosity
2. Decreased need for sleep (e.g., feels rested after only 3 hours of sleep)
3. More talkative than usual or pressure to keep talking
4. Flight of ideas or subjective experience that thoughts are racing
5. Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed
6. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation (i.e., purposeless non-goal-directed activity)
7. Excessive involvement in activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)

The mood disturbance should be sufficiently severe to cause marked impairment in social or occupational functioning or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features. The episode should not be attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication, other treatment) or another medical condition [36].

Medicalization: The process by which a symptom, condition and/or finding becomes defined and the subject of treatment. The term medicalization is commonly used to describe the processes increasing and/or contributing to excessive medical treatment (e.g., x-ray evidence of minor ubiquitous degenerative findings is translated into a patient's excessive somatic focus for more treatment to 'fix' the problem and/or the provision of excessive clinician treatments).

An example of mental health medicalization is when a psychosocial issue such as job dissatisfaction is noted by a professional as being a "condition" and then is used as a cause for the individual to be absent from the workplace. Psychosocial issues are subjective in nature. They vary one person to another. Typically, psychosocial issues are not conditions. They lack diagnostic criteria. When psychosocial issues are inaccurately noted by a professional as being equivalent to a mental health condition, then, the psychosocial issue has been inappropriately medicalized.

Neurological Disorder: A disease of the central and peripheral nervous system, including epilepsy, Alzheimer disease, dementia, stroke, migraine, multiple sclerosis, Parkinson's Disease, brain tumors, and traumatic disorders [57].

Nocebo Effect: The opposite of placebo effect, occurring when the patient believes that exposure to treatment, activity, or event may be harmful and leads to adverse effects or results in less benefit than expected.

Outcome Measure: Outcomes measures include assessments of quality of life, physical, mental, occupational, and social health. Measures may be obtained from self-rating scales, and questionnaires which are then compared with objective measures. They may be used to track progress and/or assess function compared with others.

Pain Disorder: An ICD-10-CM diagnosis that is assigned to patients with chronic pain. Pain Disorder has two subtypes. The first, F45.41 "Pain disorder exclusively related to psychological factors" is a psychological or stress-related condition that is neither precipitated by nor associated with any objective pathophysiology (e.g. chronic tension headache). The second, F45.42 "Pain disorder with related psychological factors" is a biopsychosocial diagnosis where pain is believed to be associated with both medical and psychological diagnoses (e.g. herniated lumbar disc and depression).

Note that the ICD-10-CM diagnosis of Pain Disorder is more closely associated with DSM-IV-TR concepts than it is with DSM-5-TR, and that the DSM-5-TR diagnosis of "Somatic Symptom Disorder, Pain Predominant" has no equivalent in ICD-10-CM. While the DSM-IV-TR diagnosis of Pain Disorder was diagnosed in part by "medically unexplained symptoms," this is now believed to be a misleading criterion. When F45.42 is diagnosed, the code for the associated medical diagnosis should also be provided.

Panic Disorder: Panic disorder is a type of anxiety disorder in which a patient will experience "recurrent unexpected panic attacks," which are defined as "an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes" [(36)]. Symptoms can include heart palpitations, sweating, shaking, choking sensation, chest pain or discomfort, and "derealization (feelings of unreality) or depersonalization (being detached from one-self)" [(36)].

Placebo Effect: A placebo effect is a beneficial effect that is not attributable to the intervention itself. This effect may be based on patient and clinician belief(s) and/or expectation(s). This includes clinical improvement or benefit (which can be objective or purely subjective) seen when a patient's belief that a placebo medication (e.g., dextrose) or sham treatment will help him or her get well, even when there is no reason to believe that any true or specific therapeutic effect has occurred.

Posttraumatic Stress Disorder (PTSD): PTSD is defined [(36)] as exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:

1. Directly experiencing the traumatic event(s).
2. Witnessing, in person, the event(s) as it occurred to others.

3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse). (This criterion does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.)

Diagnosis requires the presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:

1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). Note: In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.
2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s). Note: In children, there may be frightening dreams without recognizable content.
3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)
4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
6. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
7. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
8. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
9. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred.
10. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:

- Duration of the disturbance is more than 1 month.
- The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- The disturbance is not attributable to the physiological effects of a substance (e.g., medication, alcohol) or another medical condition [36].

Psychosis: Psychosis is a manifestation of disorganized thinking. Psychosis may be associated with auditory hallucinations and loss of contact with real events. Patient with psychosis may experience delusions, hallucinations, disorganized speech, agitation, affective flattening, alogia (poverty of speech), and/or avolition [36,58].

Psychological Tests: Psychological tests are part of the standard for assessing cognitive or emotional functioning, psychological conditions. Performance of psychological tests is often indicated by a prior positive result to a psychological screening tool (see "Screening Tools" below) or by behavioral observations that raise the index of suspicion for psychopathology.

Psychological tests are usually multidimensional and have multiple validity scales. These tests are typically standardized with test results compared to norms which produce a percentile rank or other standard score. Standardized tests are protected by test security (not posted on the internet, requiring a credentials check to obtain), have studies of validity and reliability, and typically have a published peer review. These are typically interpreted by a psychologist, neuropsychologist, or other mental / behavioral health professional with appropriate training.

Psychosocial Issues: Psychosocial issues are a combination of attitudes, beliefs, and perceptions [(59)]. Beliefs come from different sources, such as cultural, familial, coworkers, and the media. The derived information may not necessarily be accurate. Beliefs and perceptions shape an individual's attitude towards life experiences, including injury, illness, and ability to work and may result in distorted thoughts [(60)].

Screening Tools: A screening tool is generally succinct and may be as short as one or two questions. It is usually administered to either an entire population, or an entire cohort of patients with a given condition. The frequency is usually at least in the initial exam and/or once a year. The objective of most screening tools is high sensitivity, but not specificity. A screening tool may be often administered by persons with minimal training.

In contrast, brief non-standardized psychological screening tools may be freely available (e.g., The Pain Catastrophizing Scale, the CES-D, the Pain Anxiety Symptom Scale, the Pain Self Efficacy Scale) and scoring keys for these scales are publicly available. The public nature of these scales increases the ease of manipulating the results if financial incentives are present.

With few exceptions, screening tools do not have validity measures, and typically use cutoff scores rather than standardized scores with percentile ranks. These measures require less training to administer.

Sleep-Wake Disorders: Patients with these types of disorders are unable to obtain a sufficient amount of sleep. Problems occur with either tiredness upon waking up and/or difficulty in falling or remaining asleep, or inability to remain awake. These conditions can be a direct effect from another primary condition such as asthma, stress, or arthritis. These issues can be acute or chronic. Included in this group of disorders are insomnia disorder, hypersomnolence disorder, narcolepsy, breathing-related sleep disorders, circadian rhythm sleep-wake disorders, parasomnias, nightmare disorder, non-rapid eye movement sleep arousal disorders, restless legs syndrome, and substance/medication-induced sleep disorder [(36)].

Somatic Symptom Disorders: Somatic symptom disorders consist of somatic symptom disorder (confusingly the same name as the category), illness anxiety disorders, conversion disorder, psychological factors affecting other medical conditions, and factitious disorder. Unlike somatoform disorders where unexplained medical symptoms were a central construct, "some other mental disorders may initially manifest with primarily somatic symptoms (e.g., major depressive disorder, panic disorder). Such diagnoses may account for the somatic symptoms, or they may occur alongside one of the somatic symptom and related disorders" [(36)]. Somatic symptom disorder can be diagnosed whether or not an objective medical condition is present or not, and refers to a state where a patient has a high level of anxiety or inaccurate beliefs about the medical condition in question.

Somatoform Disorders: A category of related mental disorders found in the ICD-10 / DSM-IV in which there are symptoms and concerns which are not medically explained. This group of disorders includes pain disorder, conversion disorder, somatization disorder, hypochondriasis, and body dysmorphic disorder. Pain disorder, which falls into this category, may or may not be associated with a medical condition. Except for pain disorder, the somatoform disorders are infrequently encountered in association with a work injury and are normally not considered occupational disorders. However, they are prominent in the differential diagnosis for patients with chronic pain, and symptoms of somatization are commonly seen in patients with chronic pain. Body dysmorphic disorder is sometimes found in chronic non-malignant pain patients with burn injuries or amputations. These diagnoses are important diagnostic considerations in the chronic pain population and are often difficult to detect without formal psychological evaluation and testing [(61)].

Due to the difficulty of determining whether a symptom was "medically unexplained," and the questionable assumption that a physician's inability to explain symptoms was a sign of psychopathology in the patient, DSM-5-TR and ICD-11 replaced this construct with Somatic Symptom Disorder and Bodily Distress Disorders, respectively [(36)].

Subacute Pain: Pain lasting 1 to 3 months.

Substance Use Disorder and Dependence: These issues result from maladaptive patterns of alcohol or substance use leading to significant impairment or distress, such as recurrent use resulting in failure to fulfill major role obligations, use in potentially hazardous situations, and legal problems. The use of alcohol, psychoactive drugs and/or other substances may increase the symptoms of many mental illnesses [(62)]. ICD 10/DSM-IV, and DSM-5-TR definitionally differ [(36,63)].

Symptom Magnification: This is a term that commonly denotes conscious or unconscious increases in reported pain or other symptoms levels beyond those the patient is experiencing. Examples include pain behaviors such as exaggerated impacts on gait, range of motion, strength and other functions.

Trauma: Traumatic events are detailed for purposes of assessing PTSD and ASD in the DSM-5-TR. Because the criteria are extensive, the interested reader is referred elsewhere [36]. Briefly, the definition of trauma includes event(s) occurring when the patient has been personally or indirectly exposed to either actual or threatened death, serious injury (e.g., accidents, physical attack, military combat, torture, exposure to war-zones, urban or domestic violence, and manmade or natural disasters) or sexual violence [36]. It is also sufficient if the patient (i) witnesses the event occurring to others in person; learns of the event(s) occurring in a close family member to close friend; or experiences repeated or extreme exposure to aversive details of the traumatic event(s) such as first responders collecting human remains, police officers repeatedly being exposure to details of child abuse.

Visual Analog Scale (VAS): The VAS measures a patient's reported level of pain, ranging from "no pain" to "worst pain" by indicating a mark on a line, frequently 10 cm long. The distance from the low end of the line to the patient's "x" is the pain score.

GUIDELINE CONVENTIONS

The mental health disorders covered within each module generally follow the conventions of categorizing diagnoses used by the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision* (DSM-5-TR). There are exceptions and those include:

- The DSM-III, DSM-IV, DSM-5, DSM-5-TR, ICD-9, ICD-10, and ICD-11 have substantial differences with regard to how mind-body disorders are conceptualized, categorized and diagnosed.
- With the exception of ICD-11, diagnostic systems have allowed chronic pain to be diagnosed as a mental health disorder. (e.g., pain/somatoform/somatic symptom/bodily distress disorder), Treatments for chronic pain conditions are reviewed in the separate Chronic Pain Guideline, as well as other body-specific guidelines (e.g., Low Back Disorders, Shoulder Disorders).
- Although opioid use disorder is a mental health diagnosis, treatments for this condition are reviewed in the separate Opioids Guideline.
- Workplace stress refers to a level of emotional distress that is common to everyday life. However, workplace stress may activate the "fight or flight" response. Even though this level of stress is not a diagnosable mental health condition and is not disabling, professionals are asked to address this routinely concern; thus, it is included in the Anxiety module.
- Although DSM-5-TR groups adjustment disorders with trauma-related disorders (e.g., PTSD), adjustment disorders with depression and adjustment disorders with anxiety are reviewed in the Depression and Anxiety modules, respectively.

---

*In some nomenclatures, including the DSM-5, posttraumatic stress disorder and obsessive-compulsive disorder are treated as being separate from anxiety disorder. Nevertheless, they share features sufficiently that treatments often overlap.

†ICD-11 was implemented internationally in 2022. The status for adoption and modification in the United States is unknown. However, the federal government mandates use of the adopted ICD codes.

- Although DSM-5-TR groups illness anxiety with somatic symptom disorders, treatment for illness anxiety was judged to be more closely related to anxiety treatment than treatment for somatizing conditions. Consequently, illness anxiety is covered in the Anxiety module.

The data and studies referenced in this guideline are often based on the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition Text Revision* (DSM- V-TR). However, a given study necessarily relied on criteria in place at the time of the study's performance, and when known, those criteria have been noted in the evidence tables and throughout the text. However, not every study denoted the DSM (or other criteria used) version.

This guideline assumes that the clinician performing various functions is often not the same throughout the processes of screening, testing, treatment, monitoring, and return to work. Transitions from and between one phase to the other must be coordinated, most often by the main treating and/or primary care clinician. The clinician needs to be specific in disclosing his or her role to the patient (i.e., a clinician screening a patient for return to work may not be the treating clinician with a primary fiduciary responsibility to the patient). Additionally, the clinician for many psychological testing situations is likely a psychologist. However, other clinicians may be qualified to perform these functions based on training and/or experience.

INITIAL ASSESSMENT

The initial assessment of patients presenting with workplace mental health concerns, regardless of where they present, seeks to screen for potentially serious psychiatric disorders, to assess the patient's physical and psychosocial situation, and to establish an effective treatment plan (see Algorithm 1).

It is important to adequately evaluate and document the presenting concerns, any prior mental or medical illness, and immediate safety concerns. Attributing symptoms to mental health often indicates a diagnosis of exclusion and requires a more thorough assessment, which can be achieved through a short-term plan that includes initial counseling and education, followed by or including reassessment.

A quality initial assessment for workplace mental health requires strong communication skills, and is essential to obtain the information for correct diagnosis and establish a basis for treatment. Components of the requisite communication skills are the ability to establish rapport, the ability to listen and attend to meaning, and the ability to observe behavior carefully.

The initial assessment is a critical tool for detecting potential emotional problems that requires the attention of a mental health professional to assure safe and optimal treatment. The initial screening in the primary care or occupational contexts should typically be focused on recognizing indications for urgent mental health referral (red flags), rather than on specific psychological or psychiatric diagnosis (see Table 1). Anxiety and similar crisis lines are also implemented to prevent harm, self-harm, and suicide.

Psychological and psychiatric assessments may be performed for a variety of purposes. These have been described as including:

1. describing a patient's psychological condition, traits, attitudes or abilities;
2. making determinations about a patient's diagnosis and the cause of that condition;

3. making predictions regarding treatment outcome or future behavior;
4. developing treatment intervention plans; and/or
5. tracking treatment outcome or patient behavior [64,65,66,67].

Additionally, in the workers' compensation or other disability systems, the mental health assessment may be performed to render opinions regarding a patient's level of impairment, apportion between mental health and physical factors, apportion between occupational- and non-occupational factors, describe any functional limitations and/or clinically necessary workplace restrictions.

In motor vehicle and other crash/accident events, these assessments may be used to assist in the determination of the degree of subjective *pain and suffering* experienced as a result of an injury [68,69,70].

RED FLAGS

"Flags" are sought on initial evaluation and monitored. As a clinical case progresses, there also should be monitoring for subsequent identification of other flags that are either new and/or were not initially known. Flags are symptoms, signs, attributes, historical findings, or screening/questionnaire test results that are typically correlated with serious conditions, worse prognosis, and/or a need to consider alternate evaluative or treatment approaches, which may be adjunctive. The most commonly used are "red flags" although some also use a system that includes red, orange, yellow, blue, and black flags [71]. At least a few flags are present in many patients with mental health disorders, and these typically require addressing to achieve an optimal recovery.

Red flags are the original type of flag described. Red flags are indicators of potentially more severe and/or urgent problems. These are sought earlier in the evaluation process, and upon identification, should result in a more detailed evaluation and potentially referral(s) as needed to address.

For those who use more flags, orange flags are psychosocial flags including symptoms and/or signs of psychological disorders (e.g., depressive, anxiety, personality disorders) Orange flags may also include dangerousness to self or others, acute intoxication, psychosis, and homelessness [72]. Yellow flags are evidence of counterproductive beliefs (e.g., kinesiophobia/fear avoidant beliefs, catastrophization, pain equates to damage), emotional responses (e.g., anxiety, worry, fear, depression), and pain behaviors (e.g., avoidance of work, avoidance of ADLs, undue antalgia). Yellow flags also include poor coping strategies (e.g., overreliance on passive treatments/modalities). Yellow flags are risk factors for delayed recovery [72]. Blue flags are perceptions regarding the relationships between work and health (e.g., belief that work is injurious, coworkers/supervisor is unsupportive). Black flags are considered to be (relatively) firm limits and/or sometimes considered to include "dark red" flags denoting severe or serious situations. Firm limits include legislative restrictions for return to work, workplace policies of no modified duty, union/contractual issues that block potential performance of a modified/light duty job, conflicts with worker's compensation insurance staff/policies, and interference or over solicitousness of family and/or healthcare providers.

Examples of red-flag indicators include:

- severe impairment of mental functions,
- overwhelming symptoms (e.g., decompensating),
- suicidality,
- homicidality, and/or
- signs of substance(s) use disorders
- signs of physical or mental abuse

It is advised to keep a high index of suspicion for symptoms of a depressive disorder/MDD, which is a prevalent component of medical disorders.

In the absence of red flag indicators, the need for urgent referral or inpatient care is less likely. Further evaluation of the patient with workplace mental health concerns, but no red flags, may progress as noted in Table 1.

PATIENT HISTORY

The mental health history is fundamental to assessment, triage, and counseling patients with mental health related conditions. Presenting concerns may include diffuse, vague symptom(s) or multi-system symptoms without a physical basis. The history should include mental, emotional and physical symptoms, perceived level of function, perceived causes of stress and their meaning to the patient, and coping mechanisms. Noted changes of behavior or functioning are important indicators.

Active listening skills are of paramount importance to help the patient identify symptoms, psychosocial stressors, coping mechanisms, and other resources. Open-ended questions are helpful to elicit information, whereas closed ended questions are useful to quantify symptoms. It is advantageous to obtain history in a semi-structured interview format, to ensure that all areas are covered.

Rapport building is an important part of obtaining a good history. By asking open-ended direct questions and remaining nonjudgmental, the practitioner helps engender trust, which is critical to the patient's revealing important information. Sometimes, the patient may be embarrassed to divulge the most disturbing symptoms and stressors. Asking direct, detailed questions about difficult situations (e.g., thoughts of suicide, childhood abuse, domestic abuse) and specific areas of functioning indicates the practitioner's comfort with the subject, gives the patient permission to discuss this information, and helps him or her trust that it will be received in a nonjudgmental way. Only by attempting to identify all principal areas of mental health symptoms and dysfunction can the clinician formulate specific diagnosis and treatment recommendations.

Beyond mental health history taking, medical history details are also required to assure adequate addressing of potential confounding disorders (e.g., thyroid disorders among those with anxiety disorders or depressive disorders).

SYMPTOMS

The history includes the patient's description of current symptoms, their duration, and perceived causes or triggers, as well as a recounting of any previous episodes. This includes prior episodes for which the patient did not seek treatment. The patient's, family member's, and others' estimates of functional impairment is(are) a means to assess the severity of the problem and may guide treatment and the timing of other interventions. When a patient

presents with a mental health problem, in the absence of urgent circumstances it is important to evaluate his or her needs, risks, and strengths before dealing with external factors.

Not all individuals with workplace mental health issues will seek help even if they are having trouble with work, or difficulty adapting. It is helpful to know why, or at whose direction, the patient is seeking help. Besides self-initiating evaluation, the patient may be referred for a mental health evaluation / treatment by a supervisor, human resources manager, employer's medical department, clinician union, family member, and/or a representative of the employer's employee assistance program (EAP). In the setting of a workers' compensation claim and particularly where there are ongoing workplace-related issues, the clinician may need to selectively enlist the help of a few of these individuals to gather information and develop a treatment plan after evaluating the patient. It is best, and in some cases may be required, to advise the patient of this plan in advance of making contacts to avoid worsening dynamics."

STRESSORS AND PSYCHOSOCIAL ISSUES

Effective treatment in the context of a psychological evaluation rests on clearly eliciting biopsychosocial stressors and understanding what they mean to the patient. Stressors may be:

- internal (e.g., perfectionism),
- situational (e.g., changes in family circumstances, or financial standing),
- health-related (e.g., sudden illness of self or a family member),
- a change in mental or emotional functioning (e.g., sudden onset of mood change, anxiety, or a change in cognitive capacity).

Stressors also can be external, such as:

- a job-related change (e.g., (in)voluntary job changes, promotions, assuming a managerial role for the first time, being written up or suspended),
- the result of a natural event (e.g., flooding, storms),
- or circumstantial (e.g., a change in life circumstances, a new manager, a change in perceived level of social support [73,74].
- how the support system responds to the patient's trauma or condition (e.g. "Get over it!"; alternately treating the patient like damaged goods).

While it is important to recognize and acknowledge organizational and situational factors, it is not always possible to quickly or easily modify or eliminate an external stimulus, whereas internal stressors are more amenable to short-term adaptation in coping skills.

Moreover, stressors themselves are not psychological conditions. Instead, they are psychosocial issues. Psychosocial issues are known to complicate the treatment process and may lead to poor treatment outcomes. Thus, it is important to identify stressors in the evaluation process so that those can be addressed in treatment, e.g., teaching an individual a means to manage a situation differently.

Empirical research has consistently demonstrated that psychosocial issues are the most significant predictors of returning to work [75,76,77]. Mental health symptoms are frequently reported by individuals and professionals as reasons of perceived illness and inability to

work. However, when individuals are assessed with standardized psychological testing, psychosocial issues instead of mental health conditions are frequently found.

The psychosocial issues that were most strongly associated with lengthy workplaces absences, poor treatment outcomes, and lack of return to work are:

1. the individuals' expectations about returning to work including emotional symptoms, perceived barriers to return to work, and
2. misperceptions regarding ability to work while being treated for a mental health condition [8,75,78,79,80,81].

While some mental health conditions may cause significant impairment in functioning, psychosocial issues do not cause any impairment to function. This is because psychosocial issues are subjective in nature and vary from one to person to another. While valid mental health conditions have diagnostic criteria, psychosocial issues have no diagnostic criteria.

It is imperative to both identify potential psychosocial issues as part of the evaluation and treatment processes as well as separate psychosocial issues from any actual mental health conditions. The identification of psychosocial issues begins with the evaluation process and is typically later confirmed with standardized psychological testing [8,81].

Once identified, education of the differences of psychosocial issues versus psychological conditions may begin so that the individual's misperceptions may be addressed to reduce potential impact on the treatment and return to work processes.

COPING MECHANISMS

Before a clinician can help the patient enhance his or her coping skills, it is important to understand how the patient has characteristically coped with mental health situations or past stressors. Cultural influences should also be considered. Asking questions about the patient's means of coping with stressors, adverse circumstances, and mental health situations will usually be highly revealing and helpful.

Coping mechanisms can be active or passive. Examples of active coping skills include proactively confronting issues and requesting assistance from family, friends, clinicians, coworkers, unions, supervisors, and/or others (e.g., EAP personnel).

Passive coping mechanisms are escape behaviors, such as denying or avoiding issues or focusing on escape mechanisms (e.g., excessive focus on weekend activities, reckless non-occupational activities used as an escape, drug use, frequenting taverns, retirement), or engaging in maladaptive or avoidant behaviors that provide short term symptom relief but which make the person less functional (e.g. managing social anxiety by not leaving the house). However, changing one's focus may be either a maladaptive escape or a constructive way to develop new adaptations. Good judgment and careful self-evaluation are part of making any change to deal effectively with a problem.

Maladaptive coping, such as using alcohol and drugs, are dysfunctional ways to cope with mental health issues and may contribute to unrealistic self-evaluation; therefore, specific queries into the frequency and amount of alcohol, tobacco, marijuana, or other drug use are important.

The NIAAA question screener, "How many times in the past year have you had X or more drinks in a day?", where X is 5 for men and 4 for women, is helpful [82,83]. Alternately, the CAGE questions ("have you ever tried to cut down," "ever been angry when confronted,"

"ever felt guilty about your drinking," or "needed an eye-opener") can be useful in screening for alcohol dependency.

Additional lines of query include eating habits; weight changes; and changes in cooking and shopping behaviors, as these also may reveal maladaptive coping mechanisms.

OTHER RESOURCES

It is often helpful to ask the patient direct questions in identifying resources. It is also frequently helpful to ask what other resources are available for support. Some patients may effectively manage their problems alone, while others may not, particularly those who avoid asking others for help due to a belief that needing help is a sign of extreme personal weakness or failure. The process of identifying to whom or where the patient may turn for additional support, and what that means to the patient, will help develop those aspects of a treatment plan.

PRIVACY AND HIPAA

Disclosing the limits of privacy of mental health medical records is ideally accomplished during the initial evaluation.

The Health Insurance Portability and Accountability Act (HIPAA) relates to three ***covered entities***:

- a treating clinician [e.g., psychologist] who engages in electronic transactions;
- a health care clearinghouse; or
- a health plan. 45 C.F.R. § 160.103 (2013).

A "business associate" (*e.g.,* a law firm representing a "covered entity") acting on behalf of or for a covered entity or organized health care arrangement is obligated to abide by HIPAA regulations if its actions involve the disclosure of protected health information. *Id.* A subcontractor may be treated like a business associate if dealing in the creation, receipt, maintenance, or transmission of protected health information on behalf a business associate. *Id.*

Practitioners should be mindful of the HIPAA *Minimum Necessary Standard*, concerning the release of personal health information related to a mental health evaluation. The Minimum Necessary Standard, 45 CFR 164.502(b), 164.514(d), is based on best current practices that *protected health information* should not be disclosed if it is not necessary to satisfy a particular purpose or function. The minimum necessary standard requires *covered entities* to evaluate their practices and enhance safeguards as necessary to limit unnecessary or inappropriate access to and disclosure of protected health information. As a practical matter, the practitioner may view these provisions as a "for your eyes only" and "need to know" preclusion against the disclosure of protected health information.

Uses and disclosures of and requests for protected health information: A covered entity's policies and procedures must identify the persons or classes of persons within the covered entity who need access to the information to carry out their responsibilities, the categories of protected health information required, and appropriate limitations on access. If the **entire** medical record is necessary, the covered entity's policies and procedures must state so explicitly and include a justification.

The privacy rule generally requires covered entities to take reasonable steps to limit the use, disclosure, and requests for *protected health information* to the *minimum necessary* to accomplish the intended purpose. The minimum necessary standard does **not** apply to the following:

- Disclosures to the individual who is the subject of the information;
- Uses or disclosures made pursuant to an individual's authorization;
- Uses or disclosures **required for compliance with** the HIPAA *Administrative Simplification Rules*;
- Disclosures to the Department of Health and Human Services ("DHHS"), when disclosure of information is required under the *privacy rule* for enforcement purposes; and
- Uses or disclosures that are required by other law: In Workers' Compensation or Disability Insurance settings, the results of a psychological assessment are usually available to insurance carriers and *may* be available to the employer, especially if the patient has instigated a workers' compensation claim or other litigation. Regardless, most mental health professionals require patients to sign an informed consent authorizing the release of mental health records. Under HIPAA, certain information, such as name, dates of treatment, diagnosis, nature of treatment, and treatment plan can be disclosed without permission from the individual. In summary, the privacy rule permits *covered entities* to disclose *protected health information* without an individual's authorization to workers' compensation insurers, state workers' compensation administrators, employers, and other persons or entities involved in workers' compensation systems;
- Uses or disclosures required for compliance with the Health Insurance Portability and Accountability Act (HIPAA) Administrative Simplification Rules; and
- Disclosures to the Department of Health and Human Services (HHS) when disclosure of information is required under the Privacy Rule for enforcement purposes.

Mental health confidentiality differs from medical records confidentiality because two levels of mental health confidentiality are legally defined:

- psychological (neuropsychological) records; and
- psychotherapy notes.

Psychotherapy notes are accorded a higher level of confidentiality, and generally require a specific authorization for release of information. The *Minimum Necessary Standard* suggests that release of the more intimate information contained in psychotherapy notes is unnecessary for most purposes because the release of psychotherapy notes can potentially cause humiliation or harm to a patient.

The implementation specifications for this provision require a *covered entity* to develop and implement policies and procedures appropriate for its organization. The covered entity's policies and procedures must identify the persons or classes of persons within the covered entity who require access to the information to accomplish their responsibilities, the categories or types of *protected health information* absolutely required, and conditions appropriate to access.

For *routine* requests for information, the policies and procedures may be standardized protocols that limit the disclosure of protected health information to the *minimum necessary*. Individual review of each disclosure or request is not required; however, *covered entities* must develop *reasonable criteria for determining and limiting the disclosure or request* to the *minimum amount of protected health information necessary* to accomplish

the purpose of a *non-routine* disclosure or request. Non-routine disclosures and requests **must be reviewed on an individual basis** in accordance with these criteria.

Generally, an extra measure of care should be taken to obtain and document informed consent for the release of psychiatric and psychological records, and to obtain informed consent for the release of mental health-related information.

An exception to the above is the mandatory reporting requirements found in many states for abuse, self-directed violence, and other-directed violence.

STANDARDIZED TEST SECURITY

The release of "raw" psychological and neuropsychological data is frequently requested in legal proceedings. However, the release of these materials is subject to legal and ethical constraints, sometimes referred to as "test security" [84]. The term "raw data" here is defined as the examinee's specific answers, whether oral or written, drawings generated, or responses recorded by computers or other devices. Raw data are different than "test materials." "Test materials" refer to test instruments, test questions or stimuli, and test manuals relating to administration, interpretation, and scoring of subject responses.

Because the outcome of forensic psychological and neuropsychological assessment can influence the distribution of substantial amounts of money damages, "professionals involved in the adversarial judicial process, including attorneys and psychologists, might be tempted to 'educate' examinees regarding these tests before they are administered" [85,86].

The US Supreme Court ruling *Detroit Edison Co. v. National Labor Relations Board,* 440 U.S. 301 (1979) is the seminal case on the production of psychological and neuropsychological data and test materials. Based on this ruling and pursuant to an informed client/patient release, psychologists may provide test data to the client/patient or other persons identified in the release. In the absence of a client/patient release, psychologists should provide test data only as required by law or court order [84]. Those portions of test materials that include client/patient responses are included in the definition of test data. HIPAA is relevant to test data, but **not** test materials [87].

HIPAA provisions that permit patients access to their own medical records and consent and authorization to release their medical records to third parties does not facilitate access to test materials protected by copyright and trade secrets acts. A subpoena is not sufficient to allow the release of these legally protected materials. These materials can only be released to a qualified, licensed psychologist or pursuant to a protective order of court that specifies how these materials will be protected, who has access, and imposes provisions for the return or destruction of such materials at the conclusion of legal proceedings. These legal and ethical constraints also affect psychologists to whom such materials are released, who cannot disseminate these materials to non-psychologists except under the specific conditions imposed by the protective order.

Consequently, psychologists are required to exercise reasonable efforts to maintain the integrity and security of test materials and other assessment techniques according to law and the APA ethics code. Because patient responses may be recorded on test materials, whether handwritten or entered on a computer, legal and ethical standards dictate that that portion of a patient's record cannot be released except to a qualified, licensed psychologist or protective order. This is not an issue of confidentiality, which is waived in legal proceedings when a litigant places one's psychological status at issue.

WC and disability insurers are not covered entities. They are allowed to have limited information for claims adjudication. However, most insurers are unlikely to authorize or pay claims without a full release of a treatment record (not raw psychological test data, such as test answer sheets). Psychological testing reports are not considered raw test data because neither the test answer sheet forms or copyrighted psychological testing materials are utilized within the testing report. However, WC and disability insurers should take steps to protect PHI despite not being covered entities.

MEDICAL HISTORY QUESTIONNAIRE

View the Medical History Questionnaire.

CLINICAL EXAMINATION

A clinical and psychological examination is included for those with mental health concerns. There may or may not be a physical examination, depending on the type of clinician.

The focus of the clinical examination will be based on the presenting symptoms. However, it includes a general assessment of the patient's current mental and physical state. An examination may discover new diagnoses (e.g., depressed mood in undiagnosed Parkinson's disease) or confounding conditions (e.g., substance(s) use disorder and/or withdrawal); and evidence of domestic violence.

A standardized mental status examination helps detect clues to an underlying mental health disorder, assess the impact of the condition, assess impacts of stress, and document a baseline of functioning. However, mental status examinations are insufficient to infer or make conclusions about substantial cognitive functioning. All aspects of a mental status examination can be routinely incorporated into an informal interview rather than having a set list of questions, but formal and structured mental status examination will ensure that all critical areas of function are addressed and documented.

Queries into inconsistencies between the patient's presenting concerns or answers to questions and observed behaviors are often essential; addressing those inconsistencies in a curious, positive manner is suggested. Table 2 presents the major areas to cover in a mental status examination.

SCREENING TOOLS

A clinician may use screening tools either before an appointment or during an evaluation to further explore the possibility of a patient having a mental disorder. Screening tools are generally simple, take little time to complete, may be administered by non-trained personnel and emphasize high sensitivity. They are also commonly used to screen the entire population at increased risk (e.g., MDD screening). If there is concern that a patient may not be candid on a screening measure, or may be motivated to bias the information that is presented, screening tools may be omitted in favor of in-depth diagnostic testing, as in those cases, the screening tool will be of minimal or no utility.

It is important to recognize that screening tools are self-descriptive, do not address symptom validity, and are readily transparent, making it easy to under- or over-report symptoms or traits. As a result, they are useful for screening symptoms in a patient, but are not definitive diagnostic tools and should not be employed in a medicolegal setting. Table 3 lists and describes some commonly used screening measures for depression, anxiety, and substance use disorder.

Note that, for all screening measures, a positive screen is *not* diagnostic, but rather indicates that referral for more comprehensive testing and assessment is indicated.

STANDARDIZED PSYCHOLOGICAL TESTS

Standardized psychological tests involve an "assessment device that usually consists of a series of statements covering various characteristics and behavioral patterns to which the participant responds by fixed answers, such as True, False, Always, Often, Seldom, or Never, as applied to himself or herself. The scoring of such tests is objective, and the results are interpreted according to standardized norms" [(88)].

It should be noted that in the occupational mental health setting, patients who present for mental health services will commonly have a co-occurring medical condition and be referred due to exhibiting delayed recovery and/or chronic pain (see Algorithm 1). If the patient is referred purely for mental health services, traditional mental health measures are indicated. However, the psychological assessment of mental health conditions becomes more complex when a medical condition is also present.

Standardized psychological tests are constructed for the assessment of physically healthy persons who have mental health conditions and assume that the report of certain physical symptoms are indications of the presence of a psychological disorder. In the case of a physically healthy person, this assumption is valid. However, this seemingly innocuous presumption becomes problematic when mental health tests are administered to medical patients, and creates a psychometric problem called "the psychological fallacy." This fallacy is said to occur when physical symptoms endorsed on "mental health" type psychological test are presumed to be indications of a psychological condition as opposed to a medical condition [(89)].

For example, suppose a patient with pain secondary to colon cancer is being treated with chemotherapy. If this patient is administered a questionnaire designed for mental health patients, these illness symptoms could create false positive findings for somatization, hypochondriasis or other mental health conditions. Similarly, if a patient with chronic pain was assessed for depression, and reported low mood, fatigue, sleep disturbance and weight gain, that patient may appear to have effects of depression. However, these symptoms are listed as common adverse effects of gabapentin. Thus, the presence of medical conditions increases the risk of false positive findings for psychological diagnosis on mental health tests. Consistent with this, in one study, medical disease severity accounted for up to 31% of the variance in mental health test scores [(90)].

The purpose of standardized psychological tests includes integrating information from the clinical evaluation to help determine whether a patient has a classifiable mental disorder or not (see also Chronic Pain Guideline Appendix). Many clinicians rely on multiple

standardized psychological tests to assist in formulating a comprehensive evaluation and diagnosis of a patient's disorder.

In contrast to psychological tests which were developed using traditional mental health constructs to assess the mental health population, other psychological tests were developed for assessing mental health conditions occurring in patients with known medical conditions. These latter tests are sometimes referred to as "biopsychosocial," "health psychology" or chronic pain measures. Biopsychosocial measures were developed using different methods, sometimes excluding items about physical symptoms altogether to avoid the psychological fallacy, or by handling items about physical complaints differently [(15)]. These measures may also assess areas of concern unique to medical patients and are normed on medical as opposed to mental health populations.

Consequently, if a patient has been referred for a mental health assessment due to chronic pain or delayed recovery, the reader is referred to Appendix 1: Psychological and Biopsychosocial Assessment Tools of the ACOEM Chronic Pain guideline. As mental health tests provide information that tends to focus on ICD / DSM constructs, and biopsychosocial tests provide information about how a patient's medical condition is impacted by psychosocial factors, a comprehensive psychological evaluation of the medical patient often involves administering both types of measures.

A referral for psychological assessment is triggered by a positive mental health finding from a screening tool or clinical interview, and this can be completed by a clinician. A referral for psychological assessment of a medical patient can also be triggered when delayed recovery or chronic pain is present, or when required prior to certain invasive medical procedures. A clinician, most often a psychologist, may then order standardized psychological testing in the course of a clinical evaluation based upon the positive screening tool and clinical evaluation targeting various symptoms of a certain mental health disorder.

Standardized psychological testing may help focus on clinical syndromes, personality disorders, neurocognitive assessment, intellectual functioning, or a combination. The standard for most mental health diagnostic tests is to focus on the behaviors and physical symptoms of the individual. Another purpose of standardized psychological testing is for the detection of feigning.

A comprehensive discussion of standardized psychological testing is beyond the scope of these guidelines. However, general guidance for the practicing clinician follows:

- If a screening measure is positive and/or clinical observations and symptoms are suggestive of a psychiatric diagnosis, further evaluation to determine a specific diagnosis, refine a differential diagnosis, and/or generate treatment recommendations is indicated. These evaluative processes include: detailed history exploration of the potential for a diagnosis, referral to a psychologist, and/or diagnostic testing.
- When making a referral for diagnostic testing, determine in advance the type of testing that will be most helpful. If the index of suspicion is for a psychiatric/psychological condition, standardized psychological testing will generally be more helpful. On the other hand, if there is reason to evaluate cognitive changes, such as memory deficits or problems with concentration and attention, memory testing and/or neuropsychological testing with assessment of intellectual function may be helpful. It is also appropriate to request neurocognitive screening to assess for the need for a more comprehensive battery.

- Generate a clear referral question that is as specific to workplace-related clinical and health concerns as possible. For example, a request to "assess for psychopathology" is less helpful than "evaluate for psychiatric condition with a differential for adjustment disorder, depressive disorder, and anxiety disorder," or other similar, specific questions.
- If treatment recommendations are of interest, include the request in the referral question.
- Ensure that the patient signs a release of information form to allow for discussion with the evaluating psychologist.
- When the report is received, ask for clarification if there is uncertainty, and clarify any jargon that might not be understood by a non-psychologist.

Table 4 presents some of the most commonly used diagnostic assessment measures for personality, and their applicability. The list is not comprehensive. See also Appendix 1 of the ACOEM Chronic Pain guideline for health psychology tests intended for patients with mental health conditions associated with chronic pain or adjustment to illness, injury, or disability. When conducting a psychological assessment of a complex patient, it is not uncommon to administer pain/health psychology measures to assess psychological variables associated with pain, injury, illness or disability, and also more traditional mental health measures to assess personality traits or DSM-type psychological conditions. Examples of personality measures, a brief neurocognitive battery, and measures of intellectual functioning, memory, and academic achievement are included in Table 4. A comprehensive treatment of these types of assessment is outside the scope of this guideline.

MENTAL HEALTH DIAGNOSTIC SYSTEMS

Unlike medical conditions, for the most part there are no commonly used biological tests for mental health disorders [91]. Even though many mental health disorders are known to have biological aspects, these disorders are defined more by behavioral principles than they are by biology. For example, the "fight, flight, or freeze" stress response is well known, and represents the sympathetic nervous system reactions of anger (fight) and anxiety (flight), and the more recently identified polyvagal parasympathetic reactions characterized by cardioinhibition, immobilization, and "freezing" in terror [92]. Even if the physiological reactions to threat are associated with underlying biological mechanisms, the expression of these reactions are shaped by cognition, culture and behavioral principles. In other cases, many psychological disorders (e.g. personality disorders or adjustment disorders) are defined as being closely associated with learned dysfunctional coping strategies or stressful life events, making the possibility of developing biological tests for such diagnoses seem implausible.

The standard methods used for diagnosing mental health disorder are contained in two diagnostic systems, the ICD and the DSM. The DSM has been traditionally used for psychiatric diagnoses in the U.S. Elsewhere in the world, the ICD has been the dominant diagnostic system. The challenges associated with their use has been described as follows:

As the standardized classification systems have been constantly revised (from ICD-6 to ICD-10 and from DSM-I to DSM-V-TR), they have remained a descriptive taxonomy based on expressed feelings and observed behavior… without a priori biological validity… Even if one acknowledges the primacy of biological factors in some psychiatric disorders, it does not

inevitably follow that a biological test would be necessarily most informative or effective in identifying them [91].

Overall,

1. The diagnostic systems currently in use list disorders which have an uncertain relationship to biology, and over the course of time since 1950 the ICD (six versions) and the DSM (eight versions) have defined mental health disorders in a multitude of ways leading to considerable ambiguity in the research literature;
2. It seems unlikely that a biological test could identify the dysfunctional behavioral patterns described by the ICD / DSM, and
3. A biological abnormality such as heightened physiological reactivity, even when present, may not express itself in a pattern of emotion or behavior judged to be dysfunctional within a culture, and thus cannot replace ICD / DSM type taxonomies.

The ambiguity associated with mental health diagnoses creates challenges for research. As definitions of disorders has changed, in some cases considerably, over the years, research findings regarding effective treatments for a disorder may change when the definition of the disorder changes. These sorts of complexities may limit the generalizability or usability of diagnostic and/or treatment articles using a prior classification system(s). Additionally, various jurisdictions may require the use different classification systems during treatment.

Within the U.S. mental health community, DSM-5-TR is the dominant mental health conceptual system. However, HIPAA mandates the use of ICD-10 (ICD-11 has not yet been adopted in the US) for electronic medical records, and as a result DSM-5-TR diagnosis codes are "cross-walked" into the closest ICD-10 equivalent. Although DSM-5-TR and ICD-10 are largely parallel, they have significant differences. The single largest discrepancy is that the DSM-5-TR re-conceptualized the somatoform category of diagnoses, omitting the concept altogether and replacing it with a new diagnostic concept called somatic symptom disorders. However, the ICD-10-CM corresponds more closely with DSM-IV, as they were developed concurrently.

In some cases, diagnostic information may be lost or distorted in a crosswalk translation. For example, when a DSM-5-TR diagnostic construct is not contained in ICD-10, that diagnosis is often cross-walked to an "undifferentiated" version of the closest ICD-10 diagnosis. Thus, if a patient's medical records contain the diagnosis DSM-5 F45.1 Somatic Symptom Disorder (based on "excessive thoughts, feelings or behaviors" about a medical condition), HIPAA requires that this diagnosis be cross-walked to the closest ICD-10 diagnosis, which is F45.1 Undifferentiated somatoform disorder (vague and ill-defined symptoms without clear medical explanation), which is a distinctly different condition. Regardless of what is stated in the text of the medical records, undifferentiated somatoform disorder becomes the "official" diagnosis as far as payers are concerned, and is the diagnosis that is most easily accessed by others or by "big data" systems. Later, if a patient is applying for a loan, life insurance, security clearance etc., this ICD-10 diagnostic finding is the most likely information to be available. Consequently, it is important to be aware of the implications of ICD-10 crosswalks when assigning DSM-5-TR diagnoses. Additionally, it is also important to remember that under Federal law ICD-10-CM psychiatric diagnoses are valid, even if they are not contained in DSM-5-TR. While many non-DSM-5-TR/ ICD-10 diagnoses are closely parallel, some ICD-10 diagnoses are not contained in either DSM system, but nevertheless are recognized diagnostic constructs under HIPAA [93].

RETURN TO WORK

Return to work is a critical aspect of the evaluation and treatment of many workers with mental health disorders. It is helpful to evaluate these workers from a biopsychosocial perspective. Integration of suitability to perform safety critical work functions is frequently required. Often, the interaction between physical and psychological conditions plays a role in the individual's development of significant impairment in functioning; thus, it is helpful for attention to be paid to the individual's medical and psychological history.

Additional factors, such as psychosocial issues, may also be present. Psychosocial issues can impede treatment progress or negatively impact on treatment outcomes. The most frequent psychosocial issues that are related to mental health workplace leaves are: conflict with supervisor and co-workers, heavy job demands with little control over workload, company size > 100 employees, negative workplace attitudes and perceptions, poor life-work balance, poor personal coping strategies, dysfunctional personality style and traits, sense of reduced self-efficacy and poor problem-solving ability. Psychosocial issues commonly occur with physical, mental, and co-morbid conditions.

Identification of psychosocial issues early in the evaluation process may help to avoid or reduce needless medicalization, which may occur by either the individual and/or treating professional.

Unlike mental health conditions, psychosocial issues tend to be perceptual in purported impairment. Moreover, psychosocial issues do not have diagnostic criteria as mental health conditions do. Psychosocial issues do not result in impairment in functioning, whereas severe mental health conditions may result in considerable impairment in functioning temporarily. Therefore, when a professional indicates that a person is unable to work due to a psychosocial issue, the psychosocial issue is inappropriately noted to be the same as a mental health condition. Psychosocial issues are a leading cause of poor treatment outcomes for medical and psychological conditions, and thus efforts should be made to address these issues.

SUITABILITY FOR EMPLOYMENT AND RETURN TO WORK

Multiple factors affect suitability for, and decisions regarding, return to work (see Table 5). The greatest concern is naturally accorded to those jobs that involve safety critical work. Regardless of the presence of safety-critical job functions, the domains for consideration include:

- suitability for return to any work among those with mental health disorders is the diagnosis and the disorder-specific factors, including efficacy and durability of management by mental health and/or other clinician(s);
- the potential for workplace violence, including whether the past history of violence and whether the diagnosis suggests an increased risk for violence;
- assessment of job tasks, including the performance of a safety critical position;
- essential job tasks such as cognition and judgment, are also necessary which affect the accurate performance of essential job functions; and

- substances use and/or substance-related and addictive disorders and their associated comorbidities may be factors, especially for safety critical jobs.

These factors are integrated in a matrix (see Table 5).

An initial assessment of the potential for workplace violence is essential prior to return to work. Workers should not be returned to work unless there is reasonable assurance that there is low propensity for workplace violence. Factors to be considered include:

- prior acts of workplace violence
- past history of acts of non-workplace violence, particularly domestic violence
- prior planning, with greater risk accorded to evidence of a specific plan (e.g., verbalization of intent to harm another)
- diagnostic features of the mental health disorder
- resolution or removal of any inciting factors (e.g., absence from that worksite of a specific person who was the focus)
- success and durability of treatment
- time since past episode of violence or evidence of a specific plan

Workers with a prior history of homicidal ideation, attempt, or a history of violence and/or workers who have a prior history of suicidal and/or homicidal ideations or attempt require cautious and critical evaluation. A worker who has expressed suicidal ideation or attempt and/or homicidal ideation and/or engaged in a prior act of workplace violence should be permanently excluded from all but supervised employment. Similarly, a worker who has expressed suicidal and/or homicidal ideations or specific plan involving an intent to utilize workplace tools, equipment, vehicles, etc. should be permanently disqualified from jobs requiring the use of such instrumentalities. For example, previously expressed specific plan to use a mode of transportation to commit suicide, even it not actually attempted, should nevertheless result in a preclusion of return to safety critical positions involving motor vehicle or aircraft operation.

These assessments nearly always require a multidisciplinary approach, and mental health functioning is often only one part of this assessment. Mental health, psychological, psychiatric and medical management factors include the diagnosis, duration of treatment, efficacy of treatment, and complications of psychotropic medications. For example, anxiety disorders are not generally major risks for safety critical positions; however, anxiety disorders are often treated with benzodiazepines, which present major risks for motor vehicle accidents. Such complications may preclude the performance of safety critical tasks. An adjustment disorder with depressed mood may not require any limitations, but a major depressive disorder with recurring suicidal ideation in a safety critical worker may result in a lifelong disqualification from motor vehicle operation. All things being equal, the duration of treatment with the same clinician affords some measure of reliability in the determination of return to work as it should follow that the clinician has greater knowledge of the worker, associated risks, and predictability of future events.

The last domain for consideration is substances use and substance-related and addictive disorders. The greater the degree of safety critical work tasks, the more concern is accorded to risks of impairments from substances use. These impacts also affect non-safety critical jobs with considerable cognitive demands.

ASSESSMENT AND RESTRICTIONS

The existence of a mental health diagnosis alone does not indicate that the person cannot work. Many individuals with diagnosed and undiagnosed mental health conditions, such as major depressive disorder, continue to work without reduced functioning. In some instances, individuals with mental health conditions may experience diminished work capacity. If the individual continues to work, this is a common example of "*presenteeism*".

A comprehensive evaluation of the individual may identify whether reduced workplace productivity is related to psychosocial issues, or if it is related to a more severe mental health condition, such as severe major depressive disorder or co-morbid conditions. Psychological and neuropsychological tests with validity measures may be informative in these determinations.

While initially, a severely depressed, suicidal or psychotic worker is often removed from work without evaluation or testing, subsequent evaluation and testing is often mandatory to properly diagnose, treat, and support a disability determination. If a worker has reduced capacity that is related to a severe mental health condition, then the person may be placed on short-term workplace leave to allow for treatment(s) to become effective. A decision matrix for return to work and removal from work incorporating the added elements of safety critical work is presented in Table 6.

Severity of workplace safety-critical work [94,95,96,97] is defined as follows:

- **Low safety-critical work functions** include most occupations where actions or errors due to distractibility, poor concentration, poor judgment, impulsiveness, phobic avoidance, or distorted perceptions of reality may compromise work performance, but are quite unlikely to jeopardize the welfare of the worker, co-workers, general public, and/or environment. Most clerical workers and many production workers are in this category.
- **Moderate safety-critical work functions** include some occupations where actions or errors due to distractibility, poor concentration, poor judgment, impulsiveness, phobic avoidance, or distorted perceptions of reality may compromise work performance and may infrequently jeopardize the welfare of the worker, co-workers, general public, and/or environment. Many laboratory workers, some construction workers, and some production workers are in this category.
- **High safety-critical work functions** include select occupations where actions or errors due to distractibility, poor concentration, poor judgment, impulsiveness, phobic avoidance, or distorted perceptions of reality may compromise work performance and may have severe to catastrophic effects on the welfare of the worker, co-workers, general public, and/or environment. Most transportation sector jobs, financial services, firefighting, police, security, military, and direct clinicians are in this category.

Severity is defined by mental health controls adapted from the UK's National Institute for Health and Care Excellence (NICE) [98].

- **Severe**: many symptoms that make life extremely difficult, with major disruptions in social and/or occupational functioning
- **Moderate**: intermediate degree of symptoms that impact daily life and make it more difficult than usual, with intermediate disruptions in social and/or occupational functioning

- **Mild**: small number of symptoms that have limited effects on daily life, with minor disruptions in social and/or occupational functioning

CONTINUED EMPLOYMENT AND RETURN TO WORK

Most individuals with mental health conditions continue to work, despite having an identified psychological condition. Typically, after a positive mental health screen is obtained, the individual is referred for psychological evaluation and standardized psychological testing. A minimum of two psychological tests specific to the reported concerns is generally required to confirm or rule out a mental health condition. Moreover, this type of testing can more objectively discern the severity of a reported concern. If the individual's standardized psychological testing confirms a mental health condition with significant impairment in functioning, it may be necessary to place the individual on temporary, short-term workplace leave. Otherwise, if there is not significant impairment, then treatment may ensue without a workplace leave.

Related concepts are capacity and tolerance. Capacity is the amount of mental health challenges the person is able to withstand, or that person's capacity. Tolerance includes how comfortable the person is with taking on mental challenges, burdens, stresses, and dangers.

In most cases where a leave of absence is indicated, short-term workplace leave is sufficient to help stabilize the individual's condition. There are four main instances where a temporary short-term workplace leave may be necessary:

1. there is considerable impairment of function due to the severity of the mental health condition;
2. the person is found to have a positive mental health screen, the employer reports significant decline in the individual's workplace performance and the person is waiting to be evaluated for a serious mental health condition;
3. there are concerns about workplace safety; and/or
4. the person is awaiting the treatment to ameliorate serious impairment in functioning.

Most individuals with a mental health condition and significant impairment in functioning may be absent 4-6 weeks. It is unusual for a workplace leave to be necessary beyond this time-frame. Extended leaves past 2 months may be suggestive of an inaccurate mental health diagnosis, inappropriate treatment, such as treatment that lacks empirical support or does not have all components administered, or an over-reliance on subjective information, such as an individual's self-report of symptoms continuing versus the periodic assessment of treatment progression and symptom improvement.

Prolonged work absence may naturally be due to factors such as illness severity, ongoing inability to perform essential job functions, and/or resistance to treatment. However, excessive lost time unrelated to clinical severity may be due to numerous reason(s), including:

- poor adherence to empirically-supported treatment standards and guidelines,
- insufficient treatment and/or medication titration, return to work motivation,
- the lack of or inaccurate workplace communication(s),

- premature opining of disorder permanency, and reliance on subjective information versus objective assessment of functioning by treating professionals.

Ergo, it is important to give strong consideration to continue working safely, or modified duty, or a reduced schedule, as preferable alternatives to long-term leave of absence.

Leaves of absence should be reserved for those with severe impairments and/or significant disparity between worker abilities and job demands, with most empirical literature not supporting workplace leaves past 60 days. Typically, this provides adequate time for the condition to become stabilized and to start working on teaching different methods to address workplace and life concerns. This does not mean the person will necessarily be entirely symptom-free. However, treatment can often occur concurrently with the person's employment, once stabilized.

It is common for most individuals who have been on workplace leave to experience anticipatory anxiety before returning to work, yet this is not a reason for continued work absence. This problem may also be confounded by concerns about financial/insurance ramifications, if the worker is unable to function upon return. Thus, it is important not to confuse anticipatory anxiety symptoms with a relapse of a mental health condition.

Empirical research consistently demonstrates that work has strong beneficial effects [(99)], including:

- improved physical function,
- mental health,
- financial status, and
- social support.

Conversely, unemployment has been associated with a considerable decline in physical and mental health, as well as an increased risk of dying from any cause. The risk of suicide also increases sharply. Thus, although workplace absence is frequently utilized for mental health conditions, this type of action is at odds with problematic issues consequent from not working. Therefore, evidence suggests it is helpful to keep employees with mental health conditions working and use workplace leaves only when a person is determined to have severe functional impairment through more objective assessment.

The longer a person is not working, the greater risks of physically and mental deconditioning. As well, the person becomes increasingly accustomed to not working and may accept and adopt a disability role. Consequently, this is addressable by setting return to work goals as part of both the evaluation and treatment processes. This helps to set the individual's expectations and emphasizes the anticipated treatment outcome.

For those off work, there are several components in the return to work (RTW) process. The first step in RTW begins with establishing return to work as an expectation, generally from the initial appointment. This allows questions to be answered about why the return to work process will soon be initiated, how the process will proceed, who will be involved in the process, as well as the anticipated timeline for the process. The RTW plan is then enacted when the individual's functioning has improved and the mental health condition is stabilized.

In discussing RTW, it is common for the patient to raise concerns, such as not feeling ready and worrying about being able to adequately do one's job. Acknowledging these concerns is

helpful, as well as then discussing demonstrable benefits and improvements in regaining function. Moreover, the RTW process does not mean the treatment process will end. Instead, it continues as a support while the person works. Typically, it is important to educate the individual about the importance of workplace cooperation and involvement. This allows the treating professional to communicate with the employer about the employee's RTW and to discuss a graduated RTW plan, if needed. Communication with other healthcare providers also may help inform and reinforce plans for RTW. This plan may include suggestions for appropriate workplace restrictions given the patient's mental health condition, and steps that be taken to facilitate rejoining the workplace team.

If a graduated RTW plan is in place for a brief period, typically it covers up to approximately two months into RTW. To facilitate the RTW, the individual works either a gradually increasing number of hours and/or an increasing span or complexity of job task(s) (e.g., (i) a generic graduated RTW plan may start with 4 hours/day for 2 weeks, 5 hours for weeks 3 to 4, 6 hours for week 5, 7 hours for weeks 6 to 7, and then 8 hours and (ii) if the challenge is numbers of job tasks, then the limitations may gradually increase this number). For example, a generic graduated RTW plan may start with 4 hours/day for 2 weeks, 5 hours for weeks 3 to 4, 6 hours for week 5, 7 hours for weeks 6 to 7, and then 8 hours [8,9,11]. However, in other cases the RTW process for mental health disorders may not be contingent on the number of hours worked, but on graduated exposure to certain workplace activities. For example, a patient who is recovering from a mental health disorder may be able to work normal hours in a cubicle, but be unable to tolerate public speaking without decompensating emotionally. It may be necessary in some jurisdictions to have the patient sign a release to facilitate communications with the employer. Because some individuals may experience recurrence of the condition, it is often best to continue treatment for at least 6 months after RTW. Treatment continuation helps ensure arising issues are promptly addressed, provides sustained support, and fosters learning of new strategies to cope with the normal issues that arise in the workplace.

The approach for RTW as soon as possible is based on the SPICE model [100], which includes five components:

1. Simplicity (refraining from medicalization) [100,101]
2. Proximity (based at the workplace, if possible)
3. Immediacy (treatment begins at the outset of the reported condition)
4. Centrality (all parties work towards a RTW goal)
5. Expectancy (all parties' expectations regarding RTW are set appropriately and all parties work towards that goal)

While the SPICE model addressed workplace physical injuries, recently the SPICE has been adapted to address behavioral health workplace concerns. This adaptation addresses the management of psychological conditions as well as the identification of psychosocial issues from start of treatment. The RTW goal is emphasized at each stage so that the individual's expectations of RTW are set at the outset. Table 7 demonstrates the SPICE model modified for employees with mental health conditions.

TREATMENT RECOMMENDATIONS

EARLY RETURN-TO-WORK PROGRAMS FOR MENTAL HEALTH DISORDERS

Recommended

Return-to-work (RTW) programs have been used in the treatment of patients with mental health disorders. The use of early return-to-work programs is recommended.

Strength of evidence Recommended, Insufficient Evidence (I)
Level of confidence High

Indications

Workers on leaves of absence, especially if there is extended lost time, a trend towards delayed return to work, and/or barriers to return to work are candidates for early RTW interventions.

Benefits

Earlier RTW, less productivity loss, potentially faster recovery.

Harms

Negligible provided safety-critical work, essential job functions, and similar workplace issues are addressed.

Rationale

Early return-to-work programs have been used for treatment of workplace mental health (Brämberg et al., 2024, Johanson et al., 2023), and these may involve many different disciplines (e.g., mental health, physicians, nurses psychologists, physical therapists, occupational therapists, and vocational rehabilitation). All moderate-quality studies are from European countries with socialized medical systems that are considerably different from the United States, especially with respect to lost time where lost time durations are considerably worse than in the United States (e.g., Netherlands, Sweden, Norway, Denmark, Germany) (Bakker IM, 2007, Beck BD, 2015, Brouwers EP, 2006, Chen L, 2015, Lytsy P, 2017, Martin MH, 2013, Nystuen P, 2006, Rebergen DS, 2009, Schene AH, 2007, Stenlund T, 2009, van Oostrom SH, 2010)(Brämberg et al., 2024, Johanson et al., 2023, Hoff et al., 2022, Christensen et al., 2025, Hellström et al., 2023, Waldmann et al., 2023). Thus, there are no quality studies in systems similar to the United States. While early return to work is advised with high confidence, the utility these specific types of programs is ill-defined in the United States; thus, there is no recommendation for these specific types of programs.

Evidence

A comprehensive literature search was conducted using PubMed, Scopus, CINAHL, Cochrane Library, and Google Scholar without date limits using the following terms: Return to Work

OR early return to work OR early return-to-work programs; mental disorders, mental health disorders, mental illness, psychiatric disorders; controlled clinical trial, controlled trials, randomized controlled trial, randomized controlled trials, random allocation, random*, randomized, randomization, randomly; systematic, systematic review, retrospective, and prospective studies. We found and reviewed 255 articles in PubMed, 97 in CINAHL, 147 in Cochrane Library, 18000 in Google Scholar, and 0 from other sources†. We considered for inclusion 8 from PubMed, 1 from CINAHL, 0 from Cochrane Library, 0 from Google Scholar, and 0 from other sources. Of the 9 articles considered for inclusion, 7 randomized trials and 2 systematic reviews met the inclusion criteria.

† The results for databases are sorted by relevancy based on customized search term algorithms. Algorithms for each database determine relevancy. The first 100 articles are reviewed in each search, and if relevant literature appears in the first 100 articles, we review an additional 100 articles. If relevant articles appear in these additional 100 articles, we then review another 100. We continue this pattern of review until we review a batch of 100 articles that contains no relevant literature. When this happens then the remaining articles are not reviewed due to a lack of relevancy.

RISK AND CAUSATION

A risk factor is an exposure that is known to increase the probability that a given condition will occur. By contrast, an associated factor is a factor that runs in parallel with the disease, but either does not actually cause the condition to occur or has not been proven in prospective studies. The critical distinction is that an intervention that addresses an associated but non-causal factor will not change the occurrence of disease [102,103].

An example of an associated factor is serum uric acid in relationship to risk of heart attack. Uric acid levels have been known to be higher in those with heart attacks than those without. However, uric acid levels rise across the population in parallel with increasing age, obesity, and dietary factors. While higher uric acid levels occur in those with heart attacks, uric acid does not cause heart attacks. Thus, an intervention to lower the uric acid level will not lower the risk of heart attack (unless it also modifies a true risk factor, such as weight loss). Accordingly, this text attempts to use the term risk factor cautiously. From an epidemiological perspective, most of the literature misuses the term “risk factor” and instead, should be using the term “associated factor.”

The assessment of true risk factors for mental health conditions is quite challenging, particularly as the disorders, exposures (e.g., reliance on questionnaire-based symptoms especially in occupational studies), outcomes, and confounders are generally difficult to measure in large-sized prospective cohort studies. Regardless, some prospective cohort studies are being reported which measured several factors. Increasingly, it is apparent that prior assumptions of “risk factors” and outcomes were incomplete and/or inaccurate, and instead, many outcomes are now also shown to be risk factors. For example, instead of being outcomes, psychiatric conditions are now reportedly risks for depressive conditions [104,105], anxiety disorders [105], bipolar disorder [106], PTSD [107,108,109,110,111,112], and somatization disorders [113,114]. Thus, research efforts may need to turn to analyze

interactions, e.g., whether, and under what circumstances, an occupational factor may modify the risk of a mental health disorder (re)occurring in a susceptible individual.

Another area of weakness in the available literature is the nearly complete absence of objective data in large cohorts. Thus, there also is need for sizable prospective cohort studies which incorporate objective measures (e.g., numbers of co-workers, shift lengths, salary, work organizational factors) and surveys of co-workers and supervisors (e.g., measuring other's interpretations of co-worker or supervisor support). As the current body of evidence almost entirely relies on the individual's interpretations, which may or may not be accurate, it is critically important to have objective data included, otherwise, it is possible that erroneous conclusions may be drawn. For example, if the worker's interpretation is that their supervisor is not supportive (perhaps a problem related to their prior upbringing), but other coworkers think the supervisor is supportive, and factually that supervisor is engaged and supportive, then expensing funds on supervisor support training instead of, e.g., developing the worker's coping skills, would result in no change in risk for a disorder. Another example can be a reverse of this prior example, with the supervisor not being supportive and coworkers corroborating a mobbing atmosphere [115,116,117,118].

The determination of causation is a medicolegal process. Before a professional opines whether an individual received injury that was related to the workplace, it is imperative that the professional understand the complexities involved in the process to determine causation, how legal determination differs from professional treatment, and the different administrative rules involved in each jurisdiction and/or system (see also ACOEM Work-Relatedness Guideline) [3,119,120].

Condition-specific risk, causation, and prevalence information (when available) is addressed in the individual guideline modules.

WORK-RELATEDNESS

A method for determining work-relatedness is discussed in detail in the ACOEM Work-Relatedness Guideline. The condition-specific literature on risk factors is reviewed in individual modules.

Mental health disorders may be occupational. A particular case of a workplace mental health disorder may or may not be considered occupational based, in part, on the specific jurisdictional requirements [3,10]. The type of inciting event is of particular importance in many jurisdictions. In practice, most cases are usually considered not work-related. It may or may not be considered medically occupational depending on jurisdictional definitions and case law, often including whether there is, for example, a clear occupational inciting event that caused the mental disorder.

Workers' compensation claims for mental health disorders are commonly classified into one of three categories [53]:

- physical/mental,
- mental/physical, and
- mental/mental.

Various jurisdictions may or may not recognize or accept claims in these categories. These are explained in Table 8. Mental/mental claims vary from state to state, which are detailed in Table 9 [10].

FOLLOW-UP VISITS

It is recommended that most patients with workplace mental health conditions should initially follow-up within one to two weeks for work status, evaluation and treatment [54], with more frequent follow-ups for those with more severe conditions and/or those who are not at full function (e.g., not working, on part-time work or modified duty). Less frequent follow-up visits may be needed for those who have mild illnesses, are compliant, are fully functional and/or are at a stable plateau.

The purpose of these follow-up visits includes:

- re-assessing diagnosis/diagnoses,
- monitoring progress,
- treatment compliance,
- adjusting treatment,
- evaluating psychosocial factors and evaluating work limitations.

Follow-up visits also may help to further develop linkage(s) between:

- mental health and medical illness treatment plans;
- inpatient and outpatient psychiatric care plans; and
- between various types of clinicians.

Lack of timely and adequate follow up visits increases the risk of patient disengagement from treatment, which can potentially result in treatment non-compliance, medication non-compliance, readmission, and self-harm [55,56,121]. For example, patients who complied with follow up appointments had a 1 in 10 chance of being hospitalized, whereas patients who did not attend follow up appointments had a 1 in 4 chance of hospital readmission [55,57]. In addition, patients who are offered follow-up appointments visit the emergency department less frequently for self-harm than those who are not [57].

Many patients with a mental condition have co-morbid chronic medical condition(s), such as hypertension, cardiovascular disease, hyperlipidemia, diabetes, chronic fatigue, or sleep disorders [58,122]. These conditions may be more serious in patients with mental illness than those patients with the condition alone [59]. Preventable medical conditions are a leading cause of premature death in patients with mental illness [60]. Therefore, patients should attend follow up appointments to determine whether their treatment is affecting these health issues along with their mental illness.

FIGURES AND TABLES

FIGURE 1. THE BIOPSYCHOSOCIAL VORTEX

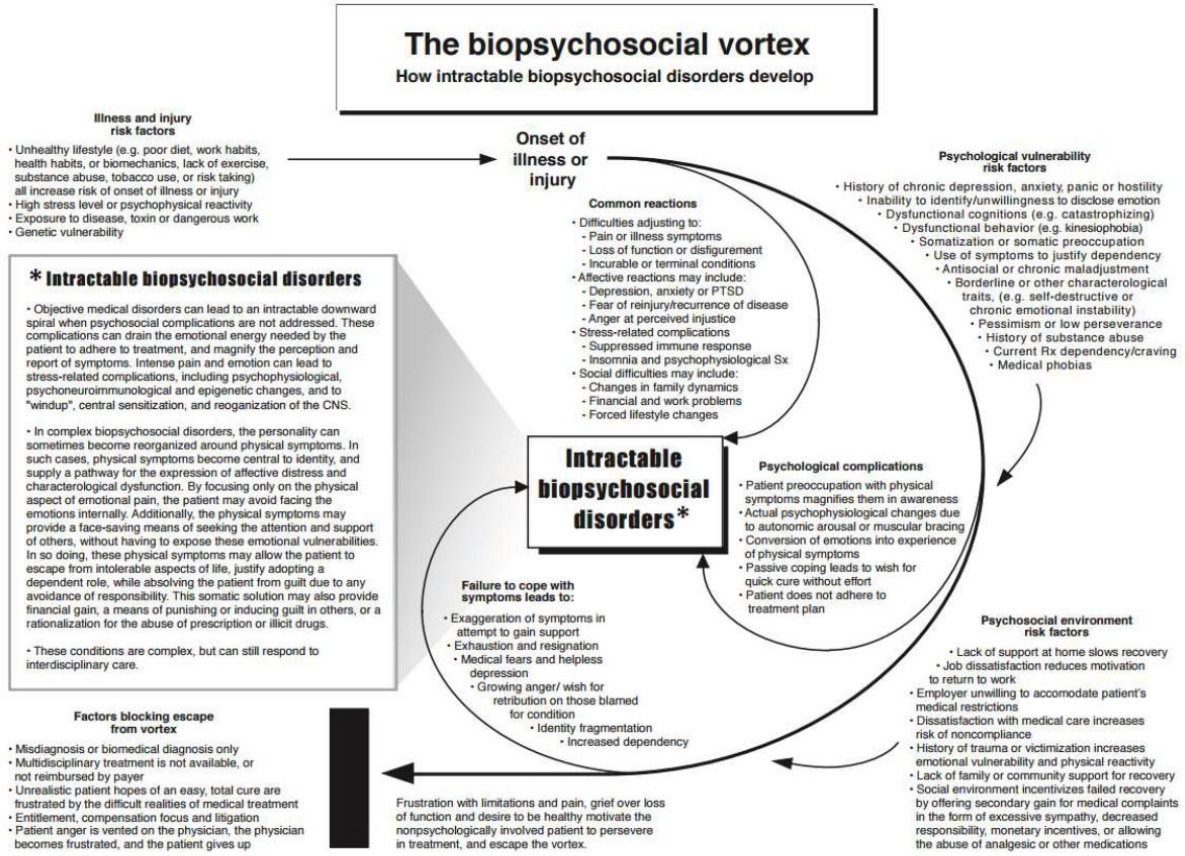

TABLE 1. RED FLAGS FOR POTENTIALLY SERIOUS MENTAL HEALTH CONDITIONS

Disorder	Medical History	Physical and Mental Status Examination
Psychosis	Pronounced suspiciousness and paranoia Hallucinations Delusions	Disorganized behavior Circumstantial, illogical speech "Clangs" or bizarre associations in speech
Mood Disorder-Depressive conditions	Chronic or acute change in mood Marked loss of interest or pleasure Disrupted sleep, appetite disturbance Change in libido Low self-esteem Suicidal ideation	Tearfulness Flat, constricted, or blunted affect Psychomotor retardation Sad or irritable mood Suicidal statements Unreasonable expressions of guilt

Post-traumatic Stress Disorder	History of traumatic event(s) Flashbacks or nightmares of the event(s) Avoidance Hypervigilance	Increased arousal Agitation or other alteration when describing a traumatic event "Blanking out" or other indicator of dissociation when discussing trauma
Possible Harm to Self or Others	Suicidal or homicidal ideation or attempts Threats of violence to self or others Describes a suicidal/homicidal plan and has the means to carry it out History of child, spouse, or elder abuse	Verbal threats Extreme guardedness in response to questions Describing being "tired of it all" Expressions of rage or extreme shame
Cognitive Disorganization or Dysfunction	Change in memory, memory loss Becoming lost in usual surroundings Change in social judgment; disinhibition Feeling of losing one's mind	Disoriented to time, place, person, or circumstance Inability to comprehend or follow directions Subnormal performance on a mental status screen
Substance Use Disorder (especially among safety critical workers)	Increased daily alcohol or drug intake Problematic use (e.g., driving while drunk) Preoccupation with obtaining and using substance Impairment of social or work role Desire for detoxification Other's describe problematic use	Intoxication Withdrawal symptoms Agitation or CNS activation Abnormal liver function studies consistent with substance use Hallucinations Diaphoresis temporally associated with drug withdrawal Flushing, dilated or constricted pupils
Overwhelming Emotional State	Overwhelming emotions; feeling overwhelmed Inability to make decisions Impaired functioning (activities of daily living) related to emotions Extreme agitation	Emotional lability Disorganized speech or behavior Agitation Exaggerated startle response

*This list is not meant to be comprehensive; it is a review of the most common suggestive historical and examination findings.

**For those who observe these behaviors but cannot refer (e.g., therapists), it may be helpful to either suggest that the patient follow up with their mental health professional and/or place a phone call to the provider to note the behavior.

TABLE 2. MENTAL STATUS EXAMINATION

General Observations

- Appearance and demeanor
- Attire
- Timeliness
- Unusual behaviors (tics, extraneous gestures)
- Eye contact
- Motor behavior (psychomotor retardation or excitement)
- Speech
- Behavior
- Cooperativeness

Cognitive Functions

- Memory: Recall of 3 words or objects, immediate and at 5 minutes
- Attention: Serial 7 subtractions, spell "WORLD" backwards
- Confrontation naming: Ask patient to name 2 common objects shown to them
- Ability to follow directions: Ask patient to perform a 3-step command
- Language construction: Read and write a sentence
- Dysarthria: Repeat "No ifs, ands, or buts"
- Construction: Copy intersecting pentangles or diamonds

Thought Processes

- Quality & fluency of speech
- Speech coherence and relevance
- Concrete thinking
- Neologisms, clangs, echolalia, or other bizarre speech patterns
- Evasiveness Anhedonia, loneliness, euphoria
- Mood swings

Thought Content

- Delusions, including type
- Phobias
- Guilt, self-reproach
- Obsessions
- Thoughts of death, suicide, or self-harm
- Thoughts of extreme anger, harming others
- Loose associations
- Concrete thinking
- Neologisms, echolalia, etc.

Perceptions

- Hallucinations, including type and sensory mechanism
- Illusions
- Depersonalization
- Derealization
- Dissociation (e.g., derealization, depersonalization, blunting of affect, or compartmentalization of mental processes)

Mood and Affect

- MDD, Anxiety disorders
- Mood: Anger, dysphoria, euphoria, anxious/fearful (Mad, sad, glad, scared)
- Anhedonia (loss of interest or pleasure), loneliness, tearfulness
- Mood swings, labile affect
- Range of affect

- Inappropriate affect
- Sensory impairment
- Somatic symptoms

Somatic Functioning

- Appetite, changes in appetite
- Vegetative depression
- Energy levels functioning (for insomnia note onset, middle, terminal) vegetative depression
- Libido, changes in libido vegetative depression
- Somatic concerns somatization involves somatic preoccupation

Orientation

- Time: Date, month, year, day of the week, time of day, season
- Place: State, county, city, building, floor
- Person: Name, date of birth, marital status, children
- Circumstance: Reason for being here, self-awareness

Memory

- Ability to recall remote events
- Short-term recall
- Processing to convert short-term to intermediate memory

Insight

- Estimate degree of awareness of self, contribution to problems, and solutions
- Does the patient recognize his / her own role in problems?

Judgment

- Estimate judgment in areas of family and other social relations, work situation, and future plans
- Evaluate with practical scenarios (if you smell smoke in a crowded theater, what would you do?)
- Intelligence

Potential for Harm

- Ask about thoughts and plans for self-injury, suicide, violence towards others

TABLE 3. COMMON SCREENING MEASURES

Assessment Task	Test Name*	Description
Depression	**BDI II**	**Beck Depression Inventory II (Pearson Clinical)*** **Measures:** Assesses cognitive, affective, and physical symptoms known to be associated with depressive disorders. **Validity Scales:** none **Norms:** Not normed, but uses cut-off scores **Comments:** Widely used in clinical practice and research to screen for depression.
	CES-D	**Center for Epidemiological Studies Depression Scale** **Measures:** Symptoms of depression **Validity Scales:** none **Norms:** None, uses cutoff scores **Comments:** Not copyrighted, freely available, widely used in research.

	HAM-D*	**Hamilton Rating Scale for Depression** **Measures:** A brief rating scale for depressive symptoms, completed by the clinician based on observations **Validity Scales:** none **Norms:** none, uses cutoff scores **Comments:** Results may be impacted by interviewer bias, but less affected by patient response set
	PHQ-9 (or 2)*	**Patient Health Questionnaire (9 question and 2 question)** **Measures:** Depressed mood **Validity Scales:** None **Norms:** None, uses cutoff scores **Comments:** Widely used screen for common symptoms of depressive disorders, free available and not copyrighted.
Anxiety	**BAI**	**Beck Anxiety Inventory (Pearson Clinical)*** **Measures:** symptoms commonly associated with anxiety disorders **Validity Scales:** none **Norms:** none, uses cutoff scores **Comments:** Commonly used in clinical care and research to screen for anxiety symptoms and disorders
	STAI-AD	**State-Trait Anxiety Inventory for Adults** **Measures:** Anxious states and traits without relying on physical symptoms **Validity Scales:** none **Norms:** none, uses cutoff scores **Comments:** Widely used in research
	GAD-7*	**Generalized Anxiety Disorder (7 questions)** **Measures:** symptoms associated with generalized anxiety disorder **Validity Scales:** none **Norms:** none, uses cutoff scores **Comments:** rapid administration, can also indicated other symptoms of anxiety
	PHQ-4*	**Patient Health Questionnaire (4 questions)** **Measures:** combines the PHQ2 with 2 additional questions to rapidly screen for symptoms associated with anxiety and anxiety disorders **Validity Scales:** none **Norms:** none, uses cutoffs **Comments:** Commonly used in clinical practice, can be used for nearly universal simultaneous screening for symptoms of depression and anxiety

Alcohol/Substance Use Disorder(s)	**AUDIT***	**Alcohol Use Disorders Identification Test** **Measures:** screens for risk of alcohol use disorders **Validity Scales:** none **Norms:** none, uses cutoffs **Comments:** 10-question scale to assess risk factors, common use in clinical practice
	CAGE* & CAGE-AID*	**CAGE (acronym derived from the questions)** **Measures:** screen for alcohol (CAGE) and drug abuse (CAGE-AID) **Validity Scales:** none **Norms:** none, uses cutoffs **Comments:** Four questions, which in the case of the CAGE-AID combines screening for substance use disorder. Common clinical use, rapid screening
	DAST*	**Drug Abuse Screening Test** **Measures:** Drug Abuse screen **Validity Scales:** none **Norms:** none, uses cutoffs **Comments:** 28 questions
	NIAAA*	**Measures:** Alcohol screen **Validity Scales:** none **Norms:** none, uses cutoffs **Comments:** One question

*This tool is in the public domain.

TABLE 4. COMMON PSYCHOMETRIC TESTS FOR PERSONALITY FUNCTIONING

Assessment Task	Test Name	Description
Personality Assessment, Psychopathology	**MCMI-IV**	**Millon Clinical Multiaxial Inventory-IV** **Measures:** 24 standardized scales keyed to the DSM-5 diagnoses, including affective disorders, psychosis, and substance use, with separate scales for each type of personality disorder. **Validity Scales:** One scale measures exaggerating, one minimizing; one bidirectional scale measures both exaggerating and minimizing, and one assesses random responding. **Norms:** Inpatient and outpatient psychiatric patients. **Comments:** Base rate scoring attempts to adjust test findings to approximate the actual base rates of psychological disorders in the psychiatric population. Computer scored. **Languages:** English and Spanish.

	MMPI-2, **MMPI-2-RF**	**Minnesota Multiphasic Personality Inventory-2, and Revised Form** **Measures:** Multiple standardized scales, measuring a wide range of psychopathology. Assesses somatic/cognitive dysfunction, emotional dysfunction, thought dysfunction, behavioral dysfunction, interpersonal functioning, and interests. **Validity Scales:** Multiple validity measures assess patient responding, with measures of both over- and under-reporting. **Norms:** Norms on 20 groups are available, including chronic pain and spine surgery candidates. **Comments:** Computer scored. The MMPI-2-RF is substantially shorter than the MMPI-2, but still longer than all other tests reviewed here. While it has many psychometric improvements over the MMPI, the MMPI-2-RF has been critiqued as having more of a psychiatric focus than the MMPI-2, and thus less capable of assessing medical patients. **Languages:** English, Spanish and French versions.
	PAI	**Personality Assessment Inventory** **Measures:** Standardized assessment of a broad cross-section of affective, characterological and psychotic conditions with 18 major scales and 31 subscales. **Validity Scales:** One scale measures exaggerating, one minimizing, one random responding, and one assesses contradictory responses. **Norms:** Community and psychiatric norms. **Comments:** A comprehensive personality test that is significantly shorter than MMPI-2. Some scales, and in particular the somatization scale, include physical symptoms that could be attributable to injury or medication side effects. This increases the risk of false positive psychological scores when medical patients report their symptoms.
Neurocognitive Function	**RBANS-update**	**Repeatable Battery for the Assessment of Neuropsychological Status – Update** **Measures:** Cognitive decline in individuals who have experienced stroke, head injury, dementia, or neurological injury or disease. Measures neuropsychological status in format and content like Wechsler tests. It measures attention, language, memory, and visuospatial/constructional abilities. **Validity Scales:** Concurrent, criterion, construct **Norms:** Age, genders norms, uses **Comments:** The RBANS is a standardized test which assesses a variety of types of cognitive functioning. It has two forms of the test: A and B. The RBANS-Update can provide a measure of daily functioning.
Intellectual Assessment	**WAIS-IV,** **WAIS-5**	**Wechsler Adult Intelligence Scale-IV, Wechsler Adult Intelligence Scale-5** **Measures:** Adult intellectual ability and cognitive strengths and weaknesses. WAIS-IV/WAIS-5 and WMS-IV/WMS-5 are the only co-normed ability-memory instruments. **Validity Scales:** Criterion, construct, concurrent, predictive, convergent, and divergent.

		Norms: Co-normed with the WMS-IV/WMS-5. Age norms **Comments:** The WAIS-IV/WAIS-5 is a standardized test that evaluates cognitive and performance functioning. It has high internal consistency and re-test reliability. It can provide an estimate of premorbid intellectual functioning.
Memory Assessment	**WMS-IV,** **WMS-5**	**Wechsler Memory Scale-IV/Wechsler Memory Scale-5** **Measures:** Assessment of learning and memory functioning of older adolescents and adults. Measures visual and auditory memory, immediate vs. delayed memory, and free recall vs. cued recall as well as recognition. **Validity Scales:** Criterion, construct, concurrent, predictive, convergent, and divergent. **Norms:** Co-normed with the WAIS-IV./WAIS-5 Age norms. **Comments:** The WMS-IV/WMS-5 is a standardized test that evaluates cognitive and performance functioning. It has excellent internal consistency and re-test reliability. It can provide an estimate of premorbid intellectual functioning.
Academic Achievement	**WRAT-5**	**Wide Range Achievement Test-5** **Measures:** Basic academic skills of reading, spelling, and math computation. This edition has a new measurement of reading achievement. Age-based norms have been extended into age 94. Has excellent internal consistency and reliability. Has been validated against multiple other cognitive psychological tests.

TABLE 5. FACTORS AFFECTING SUITABILITY AND DECISIONS REGARDING RETURN TO WORK

1. Consideration of disorder-specific factors:

- Diagnosis
- Diagnostic features of the disorder
- Duration of diagnosis*
- Presence of associated features (e.g., co-morbidities) supporting diagnosis
- Functional consequences of the disorder
- Efficacious management of the disorder
- Risk and prognostic factors (e.g., environmental, genetic, gender-related, psychosocial, course modifiers)

2. Duration of management

3. Stability of management

4. Consideration of adverse effects of pharmacotherapy

5. Consideration of associated comorbidities

6. Potential for workplace violence

7. Assessment of work demands:

- Safety-critical position†
- Non-safety-critical position

8. Accurate performance of essential job functions (e.g., cognition, judgment, distractibility, impulsivity, irritability, risk-taking behavior, associated sleep disruption disorders)

9. Consideration of associated substance use and/or substance-related disorder(s)

---

*MDGuidelines Health Advisor Duration Tables, https://app.mdguidelines.com

†A *safety-critical position* is one that is so physically and/or mentally demanding that an employee's medical status is necessarily an important consideration in determining the worker's ability to perform safely without presenting a direct threat to the safety of the employee, co-workers, public safety, significant property damage or destruction, or significant environment harm [123].

TABLE 6. RETURN TO WORK/MEDICAL REMOVAL CONSIDERATIONS*

Safety-Critical Work Requirements	Severe Mental/Behavioral Health Condition	Moderately Severe Mental/Behavioral Health Condition	Mild Mental / Behavioral Health Condition
Low	Low threshold to remove until controlled. Removal particularly indicated if incapacitation, inability to perform essential job functions and/or inability to accommodate limitations	Intermediate threshold to remove until controlled. Removal particularly indicated if incapacitation, inability to perform essential job functions and/or inability to accommodate limitations	Removal rarely indicated.
Medium	Remove from safety-critical functions. See box above for ability to work for non-safety critical functions.	Generally, remove from safety critical functions. See box above for ability to work for non-safety-critical functions.	Removal is rarely indicated. Removal may be selectively indicated, e.g., when there are administrative rules for removal. If requires removal from safety critical function, almost never requires removal from non-safety critical functions.
High	Remove. See box above for ability to perform non-safety critical functions	Remove from safety-critical functions. See box above for ability to work for non-critical functions.	Removal is generally not indicated, but is selectively indicated for high demand critical safety functions. If requires removal from safety critical function, almost never requires removal from non-safety critical functions.

*Danger to self and/or others may override any of these matrix recommendations. Immanency of the dangers further increases the risks and needs for definitive actions.

TABLE 7. SPICE MODEL COMPONENTS TO ADDRESS BEHAVIORAL HEALTH WORKPLACE CONCERNS

Simplicity – When a psychological condition is diagnosed, the most efficacious treatment is provided to restore the individual's health to the pre-morbid level of functioning. The treatment is explained in everyday language to facilitate understanding of the treatment process. When psychosocial issues are objectively identified, they are openly separated from the psychological condition, so that the psychological condition alone is being treated and why.

Proximity – The worker and employer keep in close contact during the treatment process. Although it is increasingly common for physical disorders to be treated at or near the workplace, it is relatively uncommon for mental health disorders; however, it may be advantageous to also provide mental health evaluation and treatment at the workplace. When the individual has already been off work for an extended time, a gradual return to work process, involving slowly increasing the hours at work over a brief period of time occurs. This is a closed period, ending at 8 weeks after the return to work.

Immediacy –

(1) When a worker or individual has experienced a physical injury, the initial treating professional will evaluate with appropriate screening tools whether a psychological condition and/or psychosocial issue is also present.

(2) When a potential behavioral health issue is reported, the treating psychological or psychiatric professional completes a comprehensive evaluation, objectively assesses to confirm or rule out whether a psychological condition exists and whether any psychosocial issues are present. In addition, the behavioral health professional *may* administer objective, standardized neuropsychological testing to confirm or rule out psychological conditions as well as psychosocial issues. The tests employed will meet the American Psychological Association's current testing standards and will be specific to the concern reported. By doing each of these steps, it normalizes that psychological conditions and psychosocial issues can occur. Moreover, it identifies the physical and psychosocial aspects of a condition from the beginning to develop a more effective treatment process

Centrality –The focus of any treatment is to establish and work towards a common RTW goal with all involved parties. Psychosocial issues are discussed openly with the worker and framed as issues that do not prevent the individual from returning to work. While recognizing that it's common for individuals to experience anxiety when returning to work, the professional normalizes that anxiety typically occurs for all individuals, but does not signify that the worker should not return to work. This is to provide guidance throughout the treatment process. Therefore, the approach is comprehensive with the focus on recovery to shape the worker's expectations.

Expectancy – All treating professionals must normalize an individual's feelings and concerns that. However, treating professionals refrain from telling a worker that s/he is psychologically disabled because this is a rare occurrence and improbable in most instances. Instead, the focus remains on the anticipated outcome that most individuals with psychological conditions recover. This will help the worker to internalize this expectation.

Reprinted with permission from Pamela A. Warren, PhD [(8)].

TABLE 8. TYPES OF WORKERS' COMPENSATION MENTAL HEALTH-RELATED INJURIES

Physical/Mental	A physical injury causes a psychological injury
Mental/Physical	A work-related stressor or event results in a physical injury
Mental/Mental	A work-related trigger, such as stress, causes a psychological injury

Reprinted with permission and adapted from Pamela A. Warren, Ph.D. [10].

TABLE 9. MENTAL-MENTAL CLAIMS BY STATE

Allow mental-mental claims	*Allow mental-mental claims that occur under unusual circumstances beyond what is normally encountered by the typical employee in this occupation**	*Allow mental-mental claims, but only if the impetus for the claimed concern occurred suddenly within the scope of the job**	*Allow mental-mental claims, but with specific limitations*	*Allow mental-mental claims without concern to the impetus being unusual or sudden*
Alabama	Arizona	Colorado	Connecticut[2]	Alaska
Arkansas	Colorado[1]	Louisiana	Massachusetts[3]	California
Connecticut	Illinois	Maryland	Minnesota[4]	Hawaii
Florida	Iowa	Tennessee		
Georgia	Louisiana[1]	Virginia		
Idaho	Maine			
Kentucky	Mississippi			
Montana	Missouri			
Nebraska	New Jersey			
Nevada	New York			
New Hampshire	North Carolina			
Ohio	Oregon			
Oklahoma	Pennsylvania			
South Dakota	Rhode Island			
Wyoming	South Carolina			

Reprinted with permission from Pamela A. Warren, Ph.D. [10].

**Cannot file a psychological injury claim that arises from workplace disciplinary actions, job changes, or termination*

[1] *Some overlap between groups 2 and 3 based on case law*

[2] *Police and firefighters only*

[3] *Limited to events occurring within the workplace, except claims resulting from job changes, workplace disciplinary actions, or termination, except if the claimant can prove that harm was intended*

[4] *Limited to PTSD only if related to work activities, but not if it results from a disciplinary action, work evaluation, job transfer, layoff, demotion, promotion, termination, retirement, or similar action taken in good faith by the employer. No stress claims are allowed.*

CONTRIBUTORS

Editor-in-Chief:

Kurt T. Hegmann, MD, MPH, FACOEM, FACP

Evidence-based Practice Workplace Mental Health Panel Chairs:

Daniel Bruns, PsyD, FAPA

Pamela A. Warren, PhD

Evidence-based Practice Workplace Mental Health Panel Members:

Garson Caruso, MD, MPH, CLCP, CMLE

Joel Steinberg, MD

Les Kertay, PhD, ABPP

Mark Hyman, MD, FACP, FIAIME, FACOEM

Steven Mandel, MD

Molly Brady, PsyD

Joshua Camins, PhD, ABPP

Efrat Hedges Eichenbaum, PhD, LP, ABPP

Panel members represent expertise in clinical psychology, forensic psychology, pain/rehabilitation psychology, psychiatry, forensic psychiatry, occupational medicine, emergency medicine, internal medicine, neurology, and exercise physiology. As required for quality guidelines (Institute of Medicine's (IOM) Standards for Developing Trustworthy Clinical Practice Guidelines and Appraisal of Guidelines for Research and Evaluation (AGREE)), a detailed application process captured conflicts of interest. The above panel has none to declare relevant to this guideline.

Methodology Committee Consultant:

Nelson Haas, MD, MPH, MA, FACOEM

Research Conducted By:

Kurt T. Hegmann, MD, MPH, FACOEM, FACP

Matthew S. Thiese, PhD, MSPH

Kristine Hegmann, MSPH

Adriele Fugal, MSPH

Abril Lopez, BS

Chapman Cox, MS, PhD Candidate

Mubo Olufemi, MSc, PhD Candidate

Derrick Wong, BS

Claudia Romero, MD, MDOT, MA, MS, OTH, MSOH

Kay Chase, BS Candidate

Jacobi Seacord, BS Candidate

Logan Browne, BS Candidate

Daniel Millward, MSOH

Micah Stratton, MSOH

Tanner Griffiths, BS

Chloe Campa, BS

Maja Biggs, Bs

Dawson Bertuzzi, BS Candidate

Specialty Society and Society Representative Listing:

ACOEM acknowledges the following organizations and their representatives who served as reviewers of the PTSD Guideline. Their contributions are greatly appreciated. By listing the following individuals or organizations, it does not infer that these individuals or organizations support or endorse the PTSD Guideline developed by ACOEM. Two reviewers wished to remain anonymous.

American Academy of Physical Medicine and Rehabilitation

American Occupational Therapy Association
Scott Trudeau, PhD, OTR/L

American Physical Therapy Association
Lisa Flexner, PT, DPT, MA
Kristin Walls, PT, DPT

Association for Applied Psychophysiology and Biofeedback
Adriana Steffens, PhD, BCN, QEEGD

Society for Acupuncture Research
Rosa Schnyer, DAOM, LAc

Other Reviewer:
Baljeet Sangha, MPH, FACHE

REFERENCES

1. Hauser, Marc. Temple Grandin. 2010.

2. Nasar, Sylvia. A Beautiful Mind: A Biography of John Forbes Nash, Jr., Winner of the Nobel Prize in Economics, 1994. 1998.

3. Melhorn, Mark J., Talmage, James B., Ackerman III, William E, Hyman, Mark H. AMA Guides® to the Evaluation of Disease and Injury Causation, second edition. 2014.

4. Center for the Evaluative Clinical Sciences. Spine surgery. A Report by the Dartmouth Atlas of Health Care. CMS-FDA Collaborative.2006.

5. Centers for Disease Control and Prevention. Vital signs: overdoses of prescription opioid pain relievers---United States, 1999--2008.*MMWR*; Nov 4 2011.

6. Centers for Disease Control and Prevention (CDC). Vital signs: risk of overdose from methadone used for pain relief-United States, 1999-2010. *MMWR*; 2012.

7. Warren, PA. Behavioral health as a causation issue in workers' compensation and disability claims. *IAIABC Journal*; 2009.

8. Warren, Pamela A. Those who hesitate are lost: The case for setting behavioral health treatment and disability standards, part I. *Psychological Injury and Law*; 2013.

9. Warren, Pamela A. Those Who Hesitate are Lost: The Case for Setting Behavioral Health Treatment and Disability Standards, Part II. *Psychological Injury and Law*; 2013.

10. Warren, Pamela A. The Usage of the AMA Guides for the Determination of Psychological Injury Within the State and Federal Workers' Compensation Systems. *Psychological Injury and Law*; 2016.

11. Warren, Pamela A. Psychological Injury in the States and Federal Workers' Compensation Systems. *Handbook of Behavioral Health Disability Management*; 2018.

12. Institute of Medicine. Standards for Developing Trustworthy Clinical Practice Guidelines. 2011.

13. Engel, G. L. The need for a new medical model: a challenge for biomedicine. *Science*; Apr 8 1977.

14. Bruns, D, Disorbio, J M. The psychological assessment of patients with chronic pain. *Treatment of chronic pain by integrative approaches: the American Academy of Pain Medicine textbook on patient management*; 2015.

15. Bruns, D., Disorbio, J. M. The Psychological Evaluation of Patients with Chronic Pain: a Review of BHI 2 Clinical and Forensic Interpretive Considerations. *Psychol Inj Law*; 2014.

16. Bruns, Daniel, Disorbio, John Mark. Assessment of biopsychosocial risk factors for medical treatment: a collaborative approach. *Journal of Clinical Psychology in Medical Settings*; 2009.

17. National Institute of Mental Health, NIH. Mental Illness.*https://www.nimh.nih.gov/health/statistics/mental-illness*; 2024.

18. National Institute on Alcohol Abuse and Alcoholism. Alcohol Use Disorder (AUD) in the United States: Age Groups and Demographic Characteristics. 2024.

19. Substance Abuse and Mental Health Services Administration, SAMHSA. HHS, SAMHSA Release 2022 National Survey on Drug Use and Health Data. 2022.

20. Mnookin, S., World Bank Group. World Health Organization. Out of the shadows: Making mental health a global development priority. 2016.

21. World Health Organization. Global Health Estimates 2015: Disease burden by Cause, Age, Sex, by Country and by Region, 2000-2015. 2016.

22. World Health Administration, WHO. Mental health. 2024.

23. Statista. Frequency adults in the U.S. visited or consulted a mental health professional as of 2018. 2023.

24. Fishbain, D. A., Bruns, D., Lewis, J. E., Disorbio, J. M., Gao, J., Meyer, L. J. Predictors of homicide-suicide affirmation in acute and chronic pain patients. *Pain Med*; Jan 2011.

25. Favril L, Yu R, Geddes JR, Fazel S. Individual-level risk factors for suicide mortality in the general population: an umbrella review. *Lancet Public Health*; 2023.

26. Favril L, Yu R, Uyar A, et al. Risk factors for suicide in adults: systematic review and meta-analysis of psychological autopsy studies. *Evid Based Ment Health*; 2022.

27. Fishbain, D. A., Bruns, D., Disorbio, J. M., Lewis, J. E. Risk for five forms of suicidality in acute pain patients and chronic pain patients vs pain-free community controls. *Pain Med*; Sep 2009.

28. Petrosky E, Harpaz R, Fowler KA, et al. Chronic Pain Among Suicide Decedents, 2003 to 2014: Findings From the National Violent Death Reporting System. *Ann Intern Med*; 2018.

29. Arias D, Saxena S, Verguet S. Quantifying the global burden of mental disorders and their economic value. *EClinicalMedicine*; 2022.

30. Agency for Healthcare Research and Quality, AHRQ. Healthcare Expenditures for Treatment of Mental Disorders: Estimates for Adults Ages 18 and Older, U.S. Civilian Noninstitutionalized Population, 2019. 2022.

31. Substance Abuse and Mental Health Services Administration, SAMHSA. Projections of National Expenditures for Treatment of Mental and Substance Use Disorders, 2010-2020. *HHS Publication No. SMA-14-4883*; 2014.

32. Insel, Thomas. Post by Former NIMH Director Thomal Insel: Mental Health Awareness Month: By the Numbers.2015.

33. World Bank Group. GDP. 2017.

34. OECD. Making Mental Health Count. 2014.

35. U.S. Centers for Medicare and Medicaid Services. National Health Expenditure Projections 2012-2022.

36. American Psychiatric Association, APA. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR®). 2022.

37. Brinker, Jenna, Cheruvu, Vinay K. Social and emotional support as a protective factor against current depression among individuals with adverse childhood experiences. *Preventive Medicine Reports*; 2017.

38. Brockie, Teresa N, Dana-Sacco, Gail, Wallen, Gwenyth R, Wilcox, Holly C, Campbell, Jacquelyn C. The Relationship of Adverse Childhood Experiences to PTSD, Depression, Poly-Drug Use and Suicide Attempt in Reservation-Based Native American Adolescents and Young Adults. *American journal of Community Psychology*; 2015.

39. Brown, David W, Anda, Robert F, Edwards, Valerie J, Felitti, Vincent J, Dube, Shanta R, Giles, Wayne H. Adverse childhood experiences and childhood autobiographical memory disturbance. *Child Abuse & Neglect*; 2007.

40. Drevin, Jennifer, Stern, Jenny, Annerbäck, Eva-Maria, Peterson, Magnus, Butler, Stephen, Tydén, Tanja, Berglund, Anna, Larsson, Margareta, Kristiansson, Per. Adverse childhood experiences influence development of pain during pregnancy. *Acta Obstetricia et Gynecologica Scandinavica*; 2015.

41. Lynch, Jason, Note, Federalism. Separation of Powers, and the Role of State Attorneys General in Multistate Litigation, 101 Colum.*L. Rev*; 1998.

42. Binder, Laurence M, Rohling, Martin L. Money matters: a meta-analytic review of the effects of financial incentives on recovery after closed-head injury. *American Journal of Psychiatry*; 1996.

43. Donges, Uta-Susan, Suslow, Thomas. Alexithymia and automatic processing of emotional stimuli: a systematic review. *Reviews in the Neurosciences*; 2017.

44. De Vries, AMM, Forni, V, Voellinger, R, Stiefel, F. Alexithymia in cancer patients: review of the literature. *Psychotherapy and Psychosomatics*; 2012.

45. Cameron, Kristjana, Ogrodniczuk, John, Hadjipavlou, George. Changes in alexithymia following psychological intervention: a review. *Harvard Review of Psychiatry*; 2014.

46. Astin, J. A. Why patients use alternative medicine: results of a national study. *JAMA*; May 20 1998.

47. Grohol, J. Anxiety Disorders. *Psych Central*; 2017.

48. Wellness Proposals. Glossary of Mental Health Terms. 2013.

49. Martin, B. In-Depth: Cognitive Behavorial Therapy. *Psych Central*; 2016.

50. Hildebrandt, J., Pfingsten, M., Saur, P., Jansen, J. Prediction of success from a multidisciplinary treatment program for chronic low back pain. *Spine (Phila Pa 1976)*; May 01 1997.

51. Jousset, N., Fanello, S., Bontoux, L., Dubus, V., Billabert, C., Vielle, B., Roquelaure, Y., Penneau-Fontbonne, D., Richard, I. Effects of functional restoration versus 3 hours per week physical therapy: a randomized controlled study. *Spine (Phila Pa 1976)*; Mar 01 2004.

52. Mayer, T. G., Gatchel, R. J., Kishino, N., Keeley, J., Capra, P., Mayer, H., Barnett, J., Mooney, V. Objective assessment of spine function following industrial injury. A prospective study with comparison group and one-year follow-up. *Spine (Phila Pa 1976)*; Jul-Aug 1985.

53. Mayer, T. G., Gatchel, R. J., Kishino, N., Keeley, J., Mayer, H., Capra, P., Mooney, V. A prospective short-term study of chronic low back pain patients utilizing novel objective functional measurement. *Pain*; Apr 1986.

54. Mayer, T. G., Gatchel, R. J., Mayer, H., Kishino, N. D., Keeley, J., Mooney, V. A prospective two-year study of functional restoration in industrial low back injury. An objective assessment procedure. *JAMA*; Oct 02 1987.

55. Rainville, J., Kim, R. S., Katz, J. N. A review of 1985 Volvo Award winner in clinical science: objective assessment of spine function following industrial injury: a prospective study with comparison group and 1-year follow-up. *Spine (Phila Pa 1976)*; Aug 15 2007.

56. WHO. Magnetic Resonance Imaging.2017.

57. WHO. Neurological Disorders: Public Health Challenges.2017.

58. Bressert, S. Depression Symptoms (Major Depressive Disorder). *Psych Central*; 2017.

59. American College of Occupational and Environmental Medicine (ACOEM). Occupational Medicine Practice Guidelines: Evaluation and management of common health problems and functional recovery in workers. 2008.

60. Halligan, Peter, Aylward, Mansel. The power of belief: Psychosocial influences on illness, disability and medicine. 2006.

61. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®)*; 2013.

62. Bressert, S. Alcohol & Substance Abuse Symptoms. *Psych Central*; 2016.

63. American Psychiatric Association. Substance-Related Disorders. *Diagnostic and Statistical Manual of Mental Fisorders (4th ed.)*; 1994.

64. Turner, S. M., DeMers, S. T., Fox, H. R., Reed, G. APA's guidelines for test user qualifications: An executive summary. *American Psychologist*; 2001.

65. Heilbrun, Kirk, Grisso, Thomas, Goldstein, Alan. Foundations of forensic mental health assessment. 2008.

66. Lebow, Jay. Consumer satisfaction with mental health treatment. *Psychological Bulletin*; 1982.

67. McDowell, Ian. Measuring health: a guide to rating scales and questionnaires.2006.

68. Bruns, Daniel, Warren, Pamela A. Assessment of psychosocial contributions to disability. *Handbook of Behavioral Health Disability Management*; 2018.

69. Bovbjerg, Randall R, Sloan, Frank A, Blumstein, James F. Valuing life and limb in tort: Scheduling pain and suffering. *Nw. UL Rev.*; 1988.

70. Bruns, D. Clinical and forensic standards for the psychological assessment of patients with chronic pain. *Psychological Injury and Law*; 2014.

71. Physiopedia. The Flag System. *https://www.physio-pedia.com/The_Flag_System*.

72. Bruns, D., Disorbio, J. M. Assessment of biopsychosocial risk factors for medical treatment: a collaborative approach. *J Clin Psychol Med Settings*; Jun 2009.

73. Andrews B, Brewin CR, Rose S. Gender, social support, and PTSD in victims of violent crime. *J Trauma Stress*; 2000.

74. Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *J Consult Clin Psychol*; 2000.

75. Hinkka, Katariina, Kuoppala, Jaana, Väänänen-Tomppo, Irma, Lamminpää, Anne. Psychosocial work factors and sick leave, occupational accident, and disability pension: a cohort study of civil servants. *Journal of occupational and environmental medicine*; 2013.

76. Gragnano A, Villotti P, Larivière C, et al. A Systematic Search and Review of Questionnaires Measuring Individual psychosocial Factors Predicting Return to Work After Musculoskeletal and Common Mental Disorders.*J Occup Rehabil*; 2021.

77. Amiri, S. Depression symptoms reducing return to work: a meta-analysis of prospective studies. *Int J Occup Saf Ergon*; 2023.

78. Laisné, François, Lecomte, Conrad, Corbière, Marc. Biopsychosocial determinants of work outcomes of workers with occupational injuries receiving compensation: a prospective study. *Work*; 2013.

79. Rydstedt, Leif W, Stansfeld, Stephen A, Head, Jenny, Woodley-Jones, Davina. Quality of workplace social relationships and perceived health. *Psychological reports*; 2012.

80. Samuelsson, Åsa, Ropponen, Annina, Alexanderson, Kristina, Svedberg, Pia. Psychosocial working conditions, occupational groups, and risk of disability pension due to mental diagnoses: a cohort study of 43 000 Swedish twins. *Scandinavian Journal of Work, Environment & Health*; 2013.

81. Smith, Peter M, Black, Oliver, Keegel, Tessa, Collie, Alex. Are the predictors of work absence following a work-related injury similar for musculoskeletal and mental health claims? *Journal of Occupational Rehabilitation*; 2014.

82. National Institutes of Health (NIH). A Pocket Guide for Alcohol Screening and Brief Intervention. 2005.

83. Smith, Peter C, Schmidt, Susan M, Allensworth-Davies, Donald, Saitz, Richard. Primary care validation of a single-question alcohol screening test. *Journal of General Internal Medicine*; 2009.

84. American Academy of Forensic Psychology, AAFP. Balancing Test Security and Discovery Rules in Forensic Psychological Practice: Official Position of the American Academy of Forensic Psychology (AAFP). 2024.

85. Kaufmann, Paul M. Protecting raw data and psychological tests from wrongful disclosure: A primer on the law and other persuasive strategies. *The Clinical Neuropsychologist*; 2009.

86. Youngjohn, James R. Confirmed attorney coaching prior to neuropsychological evaluation. *Assessment*; 1995.

87. American Psychological Association. Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults. 2017.

88. American Educational Research Association, American Psychological Association, National Council on Measurement in Education, & Joint Committee on Standards for Educational and Psychological Testing. *Standards for Educational and Psychological Testing.* 2014.

89. Bruns, D., Disorbio, J. M. The Psychological Assessment of Patients with Chronic Pain. *Comprehensive Treatment of Chronic Pain: Medical, Interventional, and Behavioral Approaches*; 2013.

90. Naliboff, B. D., Cohen, M. J., Yellin, A. M. Does the MMPI differentiate chronic illness from chronic pain? *Pain*; 1982.

91. Kapur, S., Phillips, A. G., Insel, T. R. Why has it taken so long for biological psychiatry to develop clinical tests and what to do about it? *Molecular Psychiatry*; 08/07/online 2012.

92. Porges, SW. The vagal paradox: A polyvagal solution. *Compr Psychoneuroendocrinol*; 2023.

93. Warren, Pamela A. Systemic-caused iatrogenic behavioral health disability and contradiction between diagnostic systems. *Handbook of Behavioral Health Disability Management*; 2018.

94. Evans, Sally, Radcliffe, Sally-Ann. The annual incapacitation rate of commercial pilots. *Aviation, space, and environmental medicine*; 2012.

95. FMCSA. Federal Motor Carrier Safety Administration (FMCSA) Medical Examiner Handbook.2008.

96. Hegmann, Kurt T, Andersson, Gunnar BJ, Greenberg, Michael I, Phillips, Barbara, Rizzo, Matthew. FMCSA's medical review board: five years of progress in commercial driver medical examinations. *Journal of Occupational and Environmental Medicine*; 2012.

97. Mitchell, Stuart J, Evans, Anthony D. Flight safety and medical incapacitation risk of airline pilots. *Aviation, Space, and Environmental Medicine*; 2004.

98. NICE. Common Mental Health Problems. 2011.

99. Modini, Matthew, Joyce, Sadhbh, Mykletun, Arnstein, Christensen, Helen, Bryant, Richard A, Mitchell, Philip B, Harvey, Samuel B. The mental health benefits of employment: Results of a systematic meta-review. *Australasian Psychiatry*; 2016.

100. Colledge, Alan L, Johnson, Hugh I. SPICE-a model for reducing the incidence and costs of occupationally entitled claims. *Occupational Medicine-State of the Art Reviews*; 2000.

101. Barsky, Arthur J, Borus, Jonathan F. Somatization and medicalization in the era of managed care. *JAMA*; 1995.

102. Rothman, Kenneth J, Greenland, Sander, Lash, Timothy L. *Modern Epidemiology*.2008.

103. Porta, Miquel. *A Dictionary of Epidemiology*.2014.

104. Pine, Daniel S, Cohen, Patricia, Gurley, Diana, Brook, Judith, Ma, Yuju. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archives of general psychiatry*; 1998.

105. Moffitt, Terrie E, Harrington, HonaLee, Caspi, Avshalom, Kim-Cohen, Julia, Goldberg, David, Gregory, Alice M, Poulton, Richie. Depression and generalized anxiety disorder: cumulative and sequential comorbidity in a birth cohort followed prospectively to age 32 years. *Archives of general psychiatry*; 2007.

106. Faedda, Gianni L, Serra, Giulia, Marangoni, Ciro, Salvatore, Paola, Sani, Gabriele, Vázquez, Gustavo H, Tondo, Leonardo, Girardi, Paolo, Baldessarini, Ross J, Koukopoulos, Athanasios. Clinical risk factors for bipolar disorders: a systematic review of prospective studies. *Journal of Affective Disorders*; 2014.

107. Baranyi, Andreas, Krauseneck, Till, Rothenhäusler, Hans-Bernd. Posttraumatic stress symptoms after solid-organ transplantation: preoperative risk factors and the impact on health-related quality of life and life satisfaction. *Health and Quality of Life Outcomes*; 2013.

108. Sandweiss, Donald A, Slymen, Donald J, Leardmann, Cynthia A, Smith, Besa, White, Martin R, Boyko, Edward J, Hooper, Tomoko I, Gackstetter, Gary D, Amoroso, Paul J, Smith, Tyler C. Preinjury psychiatric status, injury severity, and postdeployment posttraumatic stress disorder. *Archives of general psychiatry*; 2011.

109. Xue, Chen, Ge, Yang, Tang, Bihan, Liu, Yuan, Kang, Peng, Wang, Meng, Zhang, Lulu. A meta-analysis of risk factors for combat-related PTSD among military personnel and veterans. *PloS One*; 2015.

110. Paparrigopoulos, Thomas, Melissaki, Antigone, Tzavellas, Elias, Karaiskos, Dimitris, Ilias, Ioannis, Kokras, Nikolaos. Increased co-morbidity of depression and post-traumatic stress disorder symptoms and common risk factors in intensive care unit survivors: A two-year follow-up study. *International Journal of Psychiatry in Clinical Practice*; 2014.

111. Schoedl, Aline F, Costa, Mariana P, Fossaluza, Victor, Mari, Jair J, Mello, Marcelo F. Specific traumatic events during childhood as risk factors for posttraumatic stress disorder development in adults. *Journal of Health Psychology*; 2014.

112. Stein, Dan J, He, Yanling, Phillips, Anthony, Sahakian, Barbara J, Williams, John, Patel, Vikram. Global mental health and neuroscience: potential synergies. *The Lancet Psychiatry*; 2015.

113. Schulte, Ilva Elena, Petermann, Franz. Familial risk factors for the development of somatoform symptoms and disorders in children and adolescents: a systematic review. *Child Psychiatry & Human Development*; 2011.

114. Ritsner, Michael, Ponizovsky, Alexander, Kurs, Rena, Modai, Ilan. Somatization in an immigrant population in Israel: a community survey of prevalence, risk factors, and help-seeking behavior. *American Journal of Psychiatry*; 2000.

115. Castronovo, Marie A, Pullizzi, Amy, Evans, ShaKhira. Nurse bullying: A review and a proposed solution. *Nursing Outlook*; 2016.

116. Rodríguez-Carballeira, Álvaro, Solanelles, Jordi Escartín, Vinacua, Bienvenido Visauta, García, Clara Porrúa, Martín-Peña, Javier. Categorization and hierarchy of workplace bullying strategies: A Delphi survey. *The Spanish Journal of Psychology*; 2010.

117. Gilioli, R, Adinolfi, M, Bagaglio, A, Boccaletti, D, Cassitto, MG, Della Pietra, B, Fanelli, C, Fattorini, E, Gilioli, D, Grieco, A. A new risk in the occupational medicine setting: mobbing. *La Medicina del lavoro*; 2001.

118. Leach, Liana S, Poyser, Carmel, Butterworth, Peter. Workplace bullying and the association with suicidal ideation/thoughts and behaviour: a systematic review. *Occup Environ Med*; 2016.

119. Hegmann, KT, Thiese, MS, Oostema, SJ, Melhorn, JM. Chapter 3 - Causal Associations and Determination of Work-Relatedness. *Guides to the Evaluation of Disease and Injury Causation*; 2014.

120. Greaves WW, Das R, McKenzie JG, Sinclair DC 2nd, Hegmann KT. Work-Relatedness. *J Occup Environ Med*; 2018.

121. Aronoff, G. M., Mandel, S., Genovese, E., Maitz, E. A., Dorto, A. J., Klimek, E. H., Staats, T. E. Evaluating malingering in contested injury or illness. *Pain Pract*; Jun 2007.

122. Grohol, J. Posttraumatic Stress Disorder. *Psych Central*; 2017.

123. Austroads. Assessing Fitness to Drive for Commercial and Private Vehicle Drivers: Medical Standards for Licensing and Clinical Management Guidelines: Guidelines and Standards for Health Professionals in Australia.2003.