Psychosocial Issues in Catastrophic Injuries: Managing the Risks and Challenges

Michael Choo, **MD**, Paradigm Chief Medical Officer

Deborah Benson, PhD, Paradigm Senior Director of Clinical Services

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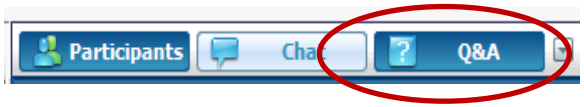
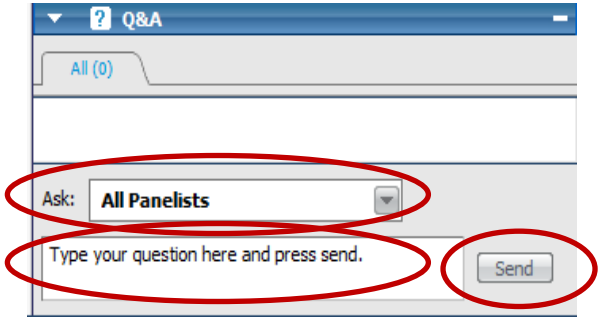
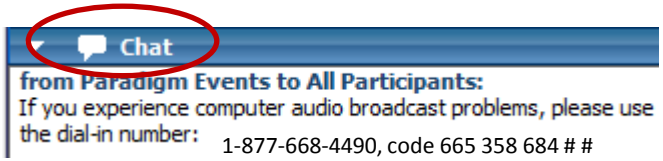






Speaker Bio

Michael Choo, MD, MBA, FACEP, FAAEM
Paradigm Chief Medical Officer

- Maintains Paradigm's relationships with network of physicians and centers of excellence. Responsible for enhancing clinical operations, research, and development.
- Teaches emergency medicine, internal medicine and family practice residents at the Wright State Boonshoft School of Medicine.
- BA and MD from Boston University's six-year accelerated honor's program in medicine and an MBA from the University of Tennessee School of Business Administration.
- Fellow of the American College of Emergency Physicians and a fellow and board member of the American Academy of Emergency Medicine.

Speaker Bio

Deborah Benson, PhD, ABPP-RP
Paradigm Senior Director of Clinical Services

- Manages Clinical Directors, Associate Clinical Directors, Nurse Case Managers and medical/clinical specialists, to develop clinical management plans that ensure positive outcomes for patients with catastrophic brain, spinal cord, burn, amputation and multiple trauma injuries
- Served as Executive Director of Transitions of Long Island, a post-acute neuro-rehabilitation program within the Northwell Health System in downstate New York, for 15 years
- PhD in Clinical Neuropsychology from the City University of New York and board certification in Rehabilitation Psychology from the American Board of Professional Psychology
- Served on the board of the Brain Injury Association of New York State (BIANYS) and remains active in the association's local chapter. Currently serves on the board of Kids' Chance of New York.

Today's Webinar Objectives

Our conversation centers on four primary goals.

1. Appreciate the ***importance*** of and understand the ***distinction*** between psychosocial risk factors and mental health conditions in recovery

2. Cite the ***diagnosis-specific prevalence*** of mental health challenges in catastrophic populations

3. Describe various ways these challenges ***impact recovery and outcomes*** in catastrophic cases

4. Understand Paradigm's ***systematic approach*** to managing psychosocial and mental health challenges and mitigating negative impact on functional outcomes

Paradigm's Perspective

Why should we focus on this?

Return to Work (RTW) = Behavior

- **Psychosocial Factors**
- **Mental Health Conditions**

Greatest Obstacles to Achieving Desired Claim Outcomes

2016 Workers' Compensation Benchmarking Study.

492 survey responses from WC claims insurance companies

Answer	Overall Rank
Psychosocial / co-morbidities	1
Lack of RTW option / accommodation	2
Litigation	3
Employee / employer relationship	4
Late injury / claim reporting	5
Proactive / timely communication with stakeholders (i.e. employee, employer, providers)	6
Legalese statutory requirements / communication	7
Employee doesn't understand the workers' comp system	8
Jurisdiction / geographic differences	9
Access to care	10

Source: Denise Zoe Algire. Study by Rising Medical Solutions November 2016

Psychosocial-Behavioral Risk Factors *vs*. Mental Health Conditions

What is the difference?

Psychosocial-Behavioral Risk Factors

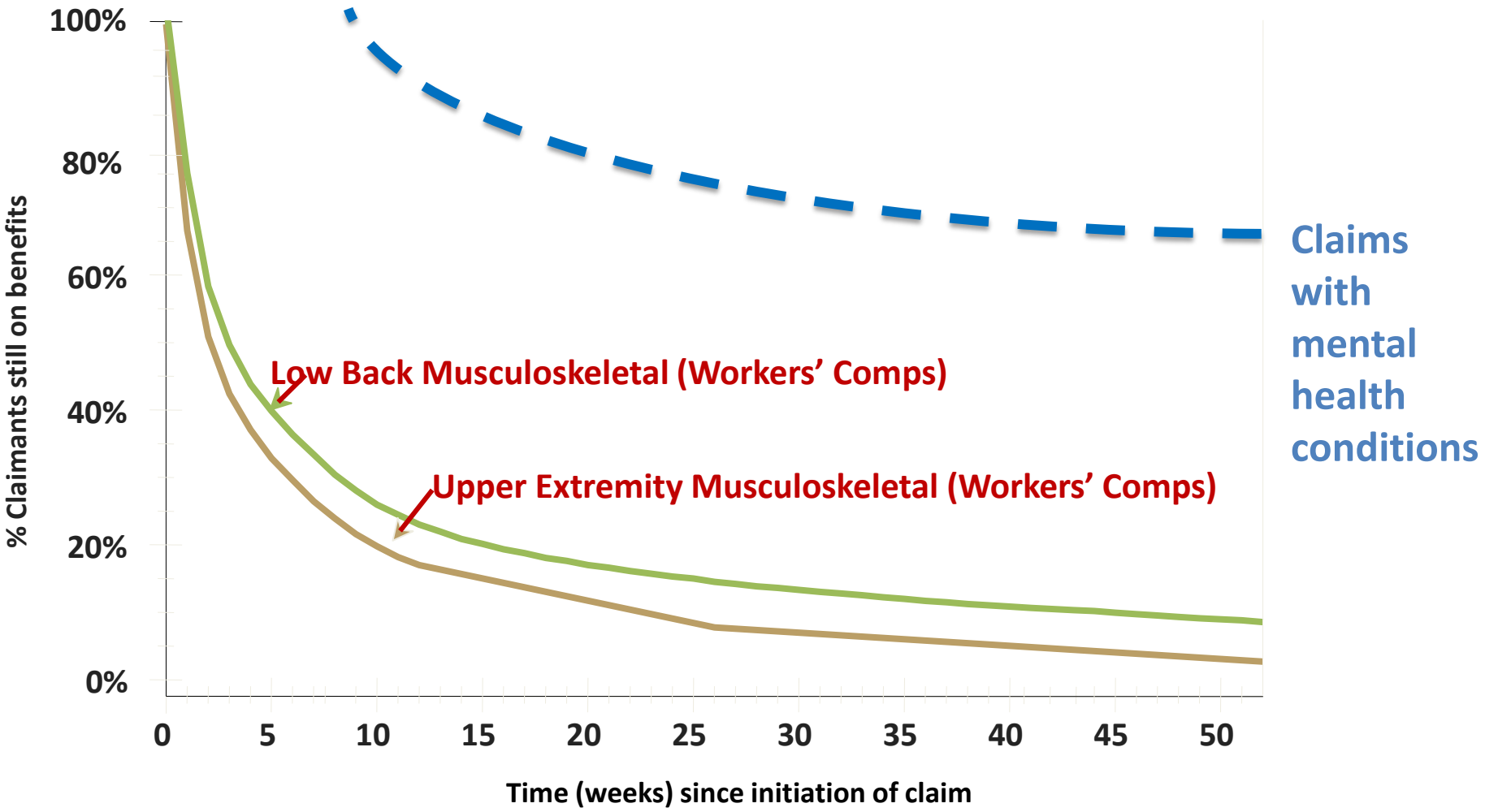
- Attitudes
- Beliefs
- Perceptions
- Emotional reactions
- Relational factors

Mental Health Condition Comorbidities

- Diagnosable
- DSM
  - Axis I
  - Axis II

Claims Duration for MSK Conditions

The impact of mental health conditions on claim duration is ***mind blowing.***



Source: Renée-Louise Franche, PhD, Consultant in Work Disability Prevention and Occupational Health

Impact of Mental Health Conditions

Why is this important?

The presence of a Mental Health Condition (MHC) predicts a longer duration of work absence.

Source: Carnide, Franche et al., 2015; Franche et al., 2009; Lotters, Franche et al., 2006

Mental Health Conditions

Congressional Research Service (CRS) Report to Congress - November 2016.

Prevalence

24.8 % of general population with Mental Health Condition

5.8% with *severe* Mental Health Condition

Source: Bagalman & Cornell. Congressional Research Service (CRS) Report to Congress November 2016

Psychosocial & Mental Health Conditions and Medical Complications

Indications from published medical research studies.

Patients with psychosocial and mental health conditions have ***worse*** physical health and ***higher*** medical complications.

- Pressure wounds and sacral decubitus
- Wound infections
- Pneumonia
- Osteomyelitis
- Chronic Pain

Literature Review: Catastrophic Injuries

Mental Health Challenges in Spinal Cord Injury Survivors

Depression

- 11-37%; 1 in 5 in SCI survivors vs 1 in 20 (general population)
- Symptoms tend to remain stable or worsen over time
- Associated with higher severity and more persistent conditions, increased utilization of SCI specialty services (e.g., PCA, psychologist visits)

(Source: SCI Model Systems database)

Anxiety

- 25% compared to 5% in controls

(Source: Hancock et al 1993)

PTSD

- 14-17% (current); 34-35% (lifetime) diagnosis rates

(Source: Radnitz et al 1995)

Alcohol/substance abuse

- 21% post injury; 35-57% pre-injury rates (alcohol)

(Source: Bombardier et al 2004)

Injury severity (ASIA level) *not related to sense of psychological well-being*

- ***Perceived*** loss of function is related to well being

(Source: Deroon-Cassini et al 2009)

Psychosocial factors

- Community access, social support, depression, predictive of employment status

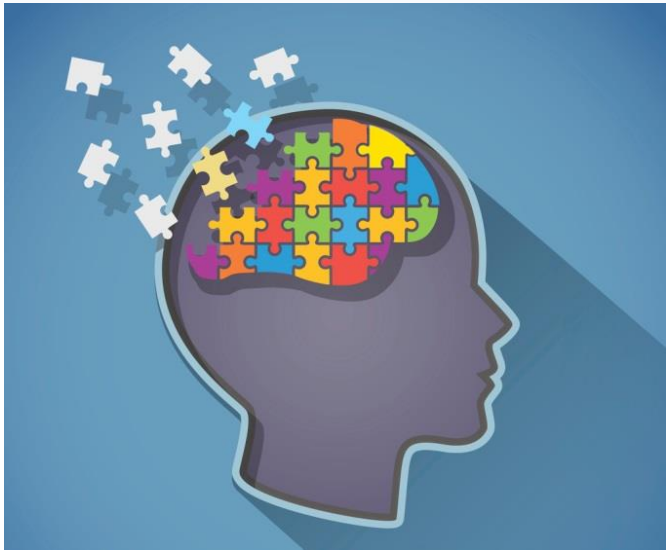
(Source: Burns et al 2010)

Mental Health Challenges in Traumatic Brain Injury Survivors

Review of Psychiatric Disorders and TBI

- Psychiatric diagnosis present: 49% severe/moderate, 34% mild (compared with 18% in normative sample)
- Depression: 15-61%
- Mania: 4-9%
- PTSD: 3-27%
- OCD: 2-15%
- Psychosis: <1-10%
- Alcohol/substance abuse: high rates pre-injury (35-51%), less post
- Personality changes: apathy 35% (severe); lability 5-33%; aggression 16-34%)

(Source: Schwarzbold et al 2008)



Depression following TBI is associated with…

- Worse global outcomes

(Source: Federoff et al., 1992)

- Worse social functioning during the first year post injury

(Source: Jorge et al., 1993b; Schoenhuber et al., 1988)

- Lower health-related quality of life

(Source: Christensen et al., 1994; Rutherford, 1977)

…even after controlling for medical, demographic and neuropsych factors

Mental Health Challenges in Burn Injury Survivors

- Prevalence for any post-injury onset disorder: 28%
  - ***Most prevailing*** was major depression (10%), generalized anxiety disorder (10%), and PTSD (7%)

(Source: Smitten et al 2011)

- At 1 month, 54% of patients showed symptoms of moderate to severe depression, and at 2 years, 43% of the patients responding ***still reported*** moderate to severe depression

(Source: Weichman et al 2001)

- 28-75% of burn injury patients had ***pre-existing*** physical or psychological conditions – higher than prevalence in general population

(Source: Patterson et al 1993)

- Prior psych history associated with ***higher rate*** of post-injury psych conditions
- ***Inconsistent associations*** between severity of injury and psychosocial adjustment
- Other factors equally or more ***important***:
  - Social support, perceived disability, coping skills, disfigurement, etc.

Mental Health Challenges in Amputation Survivors

Depression:

- 21-35%

(Source: Rybarczyk et al 2000)

Anxiety:

- 16%

(Source: Desmond & MacLachlan, 2006)

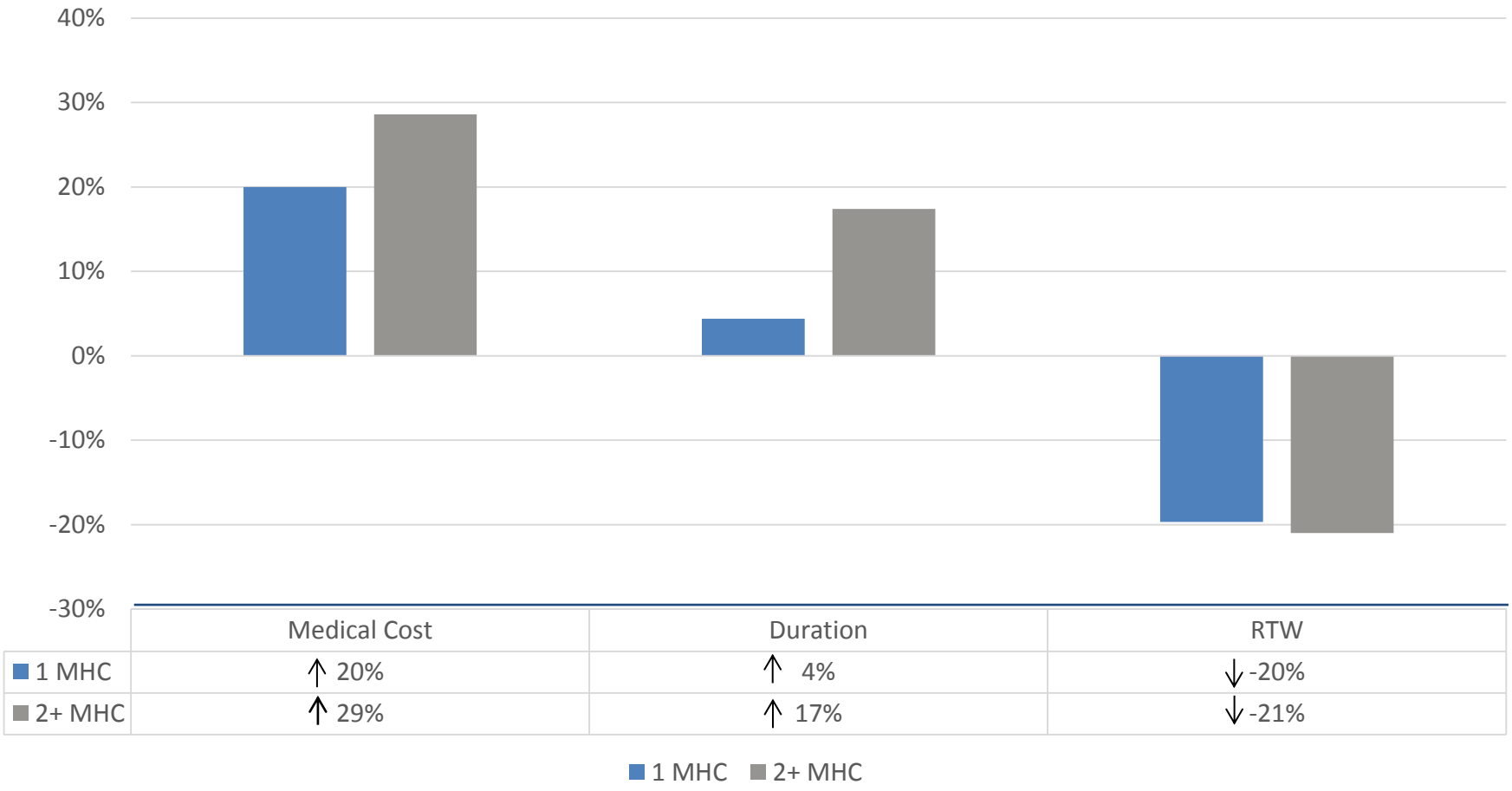
- All higher in traumatic vs non-traumatic etiologies
- No consistent relationship between level of amputation and emotional adjustment
- Level of self-reported activity restrictions ***is*** related to depression
- In one study, 50% of amputees with significant depression were not in support group even though reporting desire to be in one and available in community

(Source: Rybarczyk et al 1995)

Paradigm's Experience

Impact of Mental Health Conditions on Catastrophic Cases

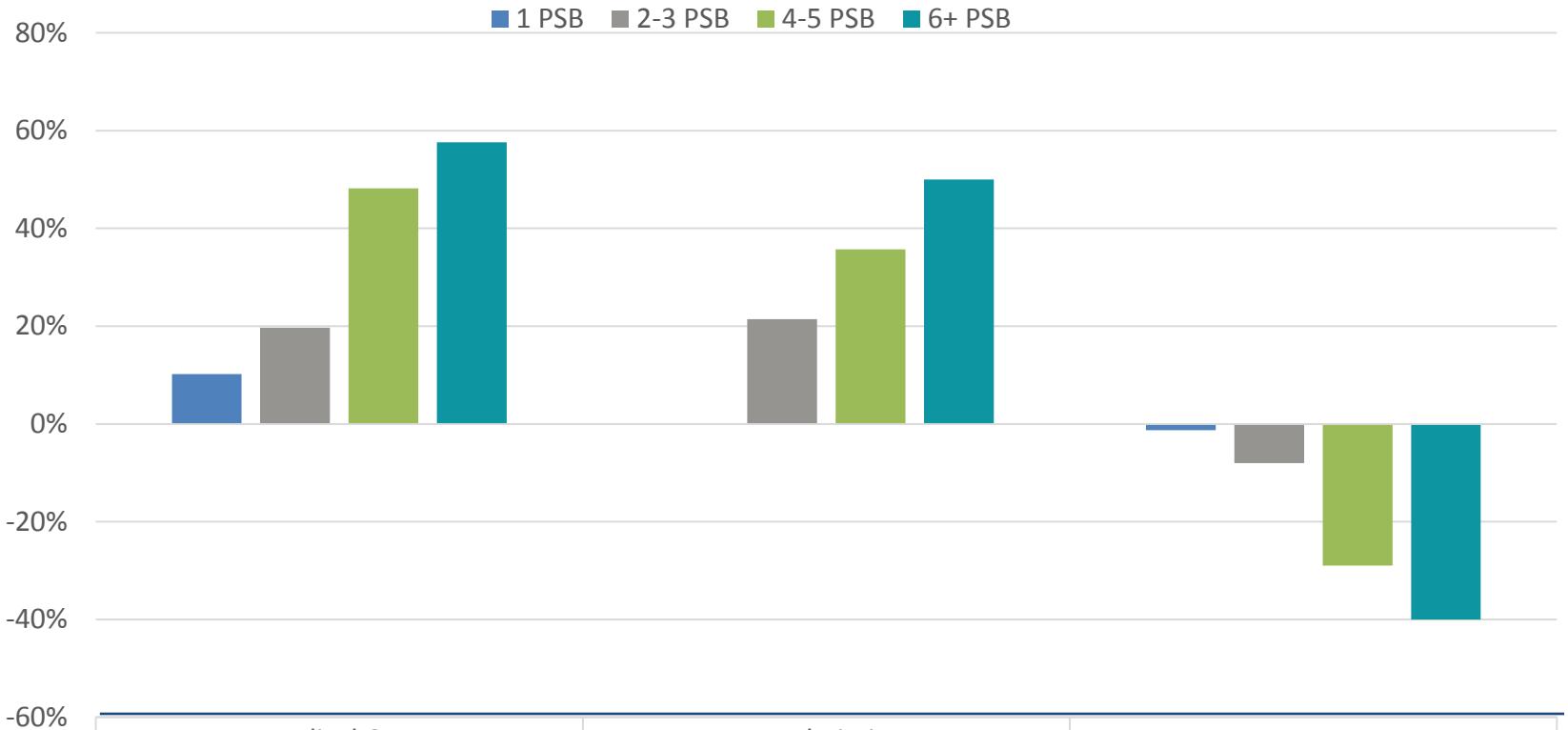
The presence of mental health conditions is associated with statistically significant increases in medical costs, duration to achieve outcomes, and decreased return to work rates. The effect increases with the number of mental health conditions compared to cases with none.



	Medical Cost	Duration	RTW
1 MHC	↑ 20%	↑ 4%	↓ -20%
2+ MHC	↑ 29%	↑ 17%	↓ -21%

Impact of Psychosocial-Behavioral Risk Factors on Catastrophic Cases

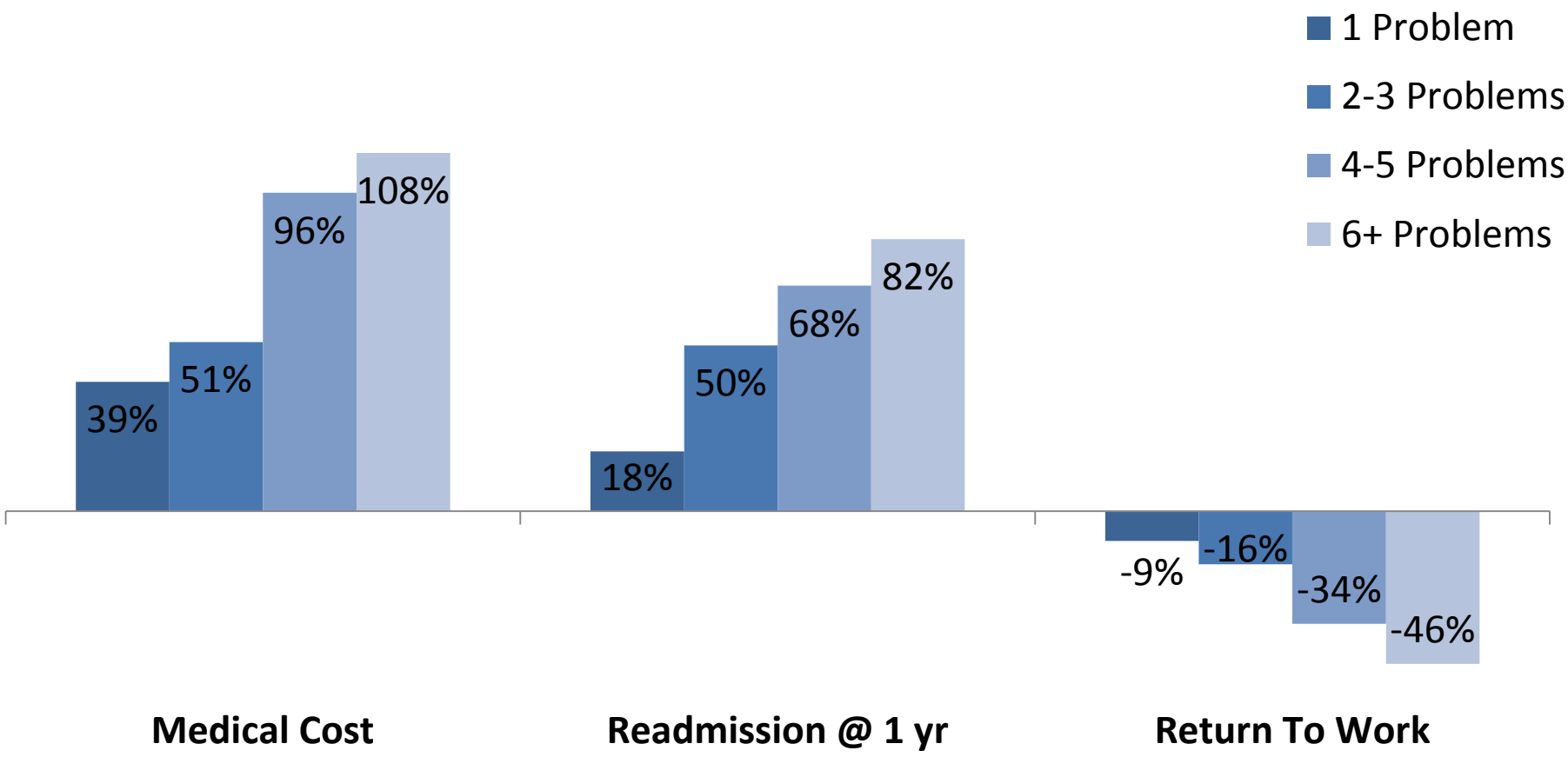
The presence of PSB risk factors is associated with increases in medical costs, 1-year hospital readmission rate, and decreased return to work rates. The effect increases with the number of PSB risk factors compared to cases with none.



	Medical Cost	1 yr. Readmission Rate	RTW
1 PSB	↑ 10%	↑ 0%	↓ -1%
2-3 PSB	↑ 20%	↑ 21%	↓ -8%
4-5 PSB	↑ 48%	↑ 36%	↓ -29%
6+ PSB	↑ 58%	↑ 50%	↓ -40%

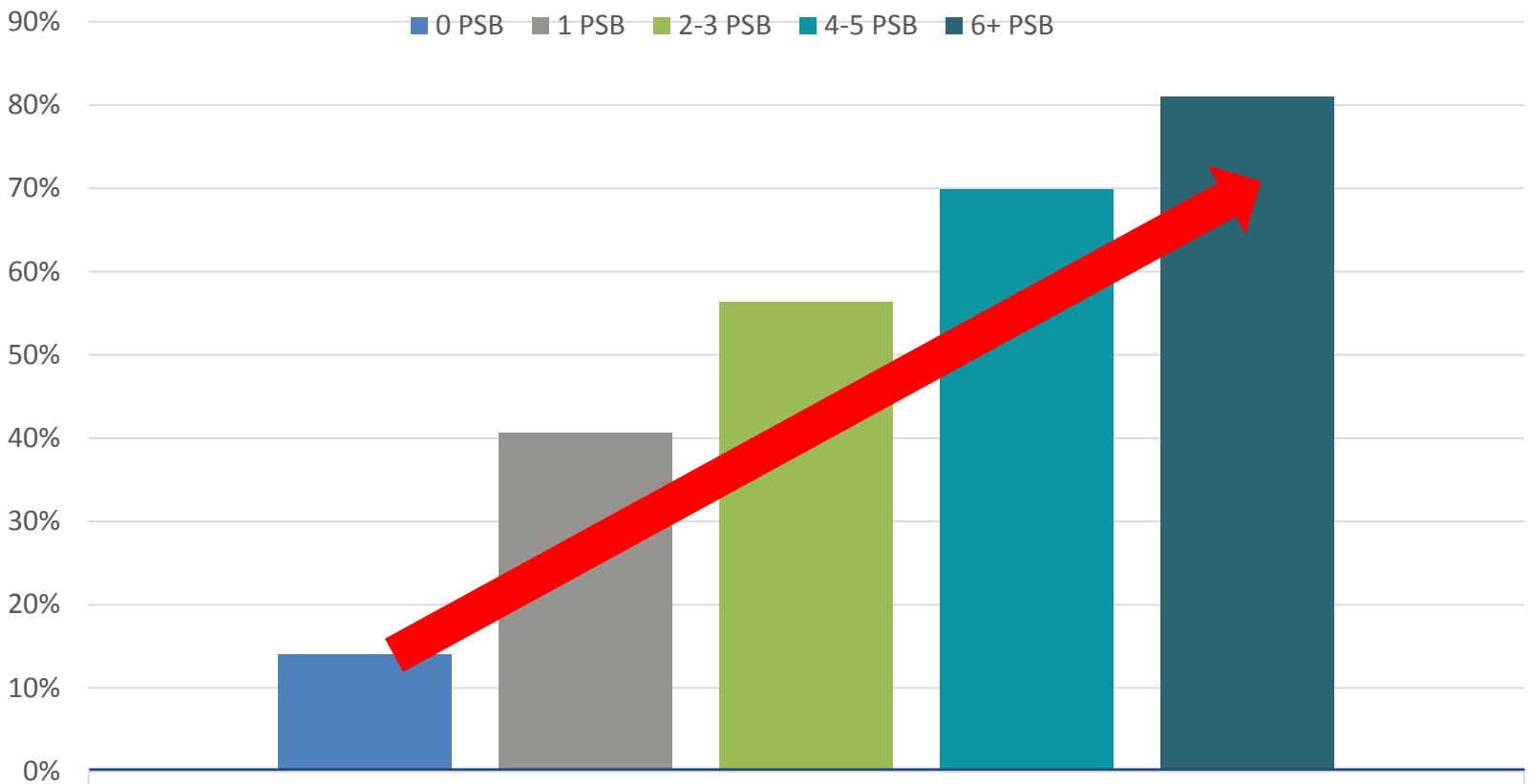
Impact of Psychosocial Problems and Mental Health Problems

The presence of psychosocial problems is associated with increased medical costs, increased hospital readmissions, and decreased return to work rates. The effect increases with the number of psychosocial problems.

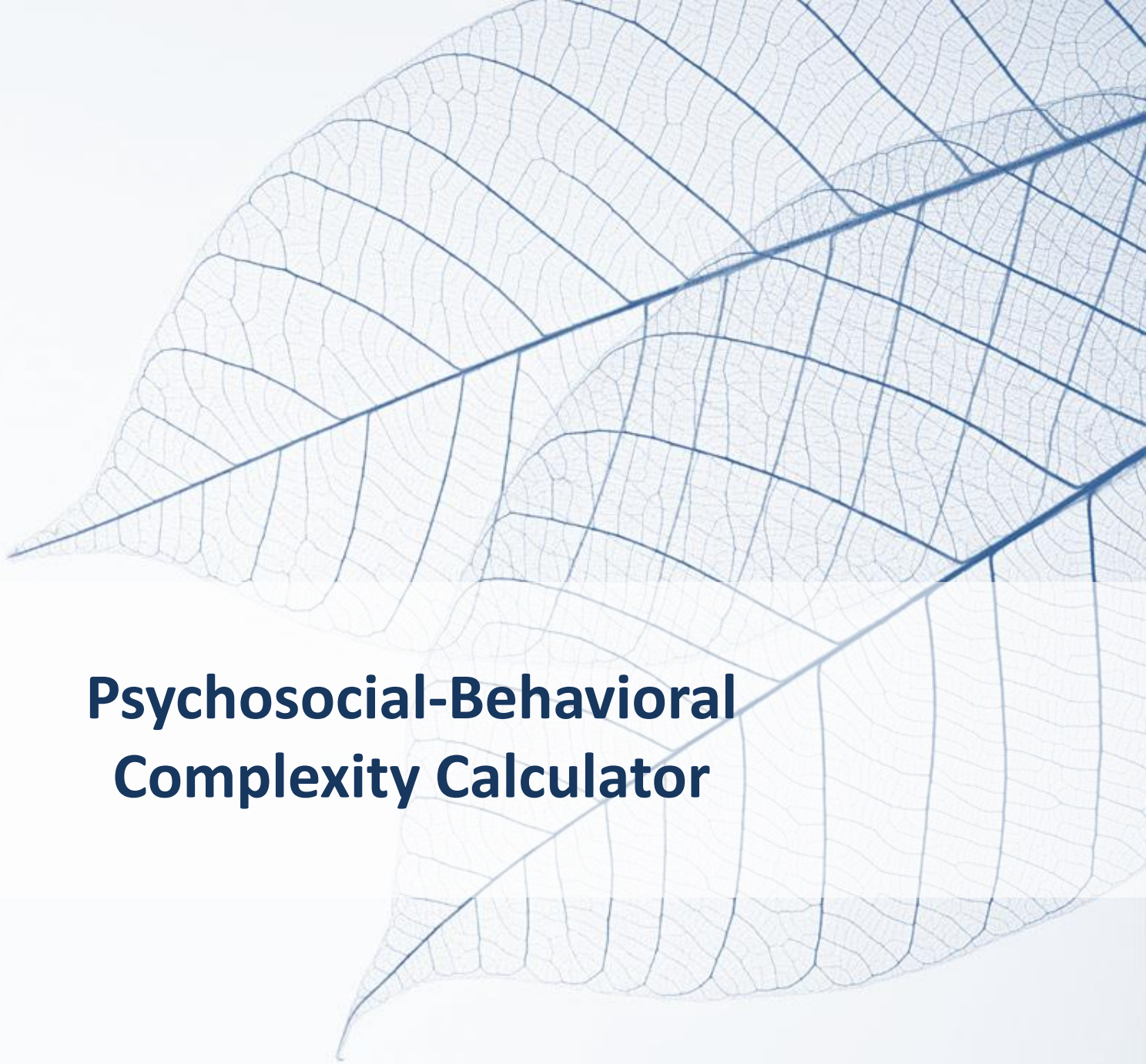


Psychosocial-Behavioral Risk Factors in Mental Health Conditions

Presence of PSB risk factors is associated with higher rate of Mental Health Conditions.



	MHC %
0 PSB	↑ 14%
1 PSB	↑ 41%
2-3 PSB	↑ 56%
4-5 PSB	↑ 70%
6+ PSB	↑ 81%

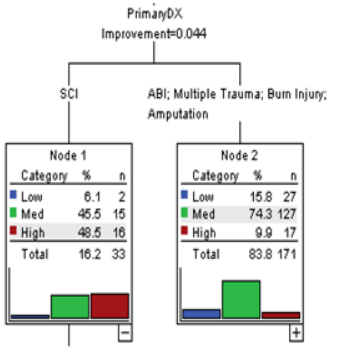


Psychosocial-Behavioral Complexity Calculator

Psychosocial-Behavioral Complexity Calculator

Predictive model facilitates risk stratification as early as possible.

Psychosocial-Behavioral Risk Drivers



Applied Statistical Model

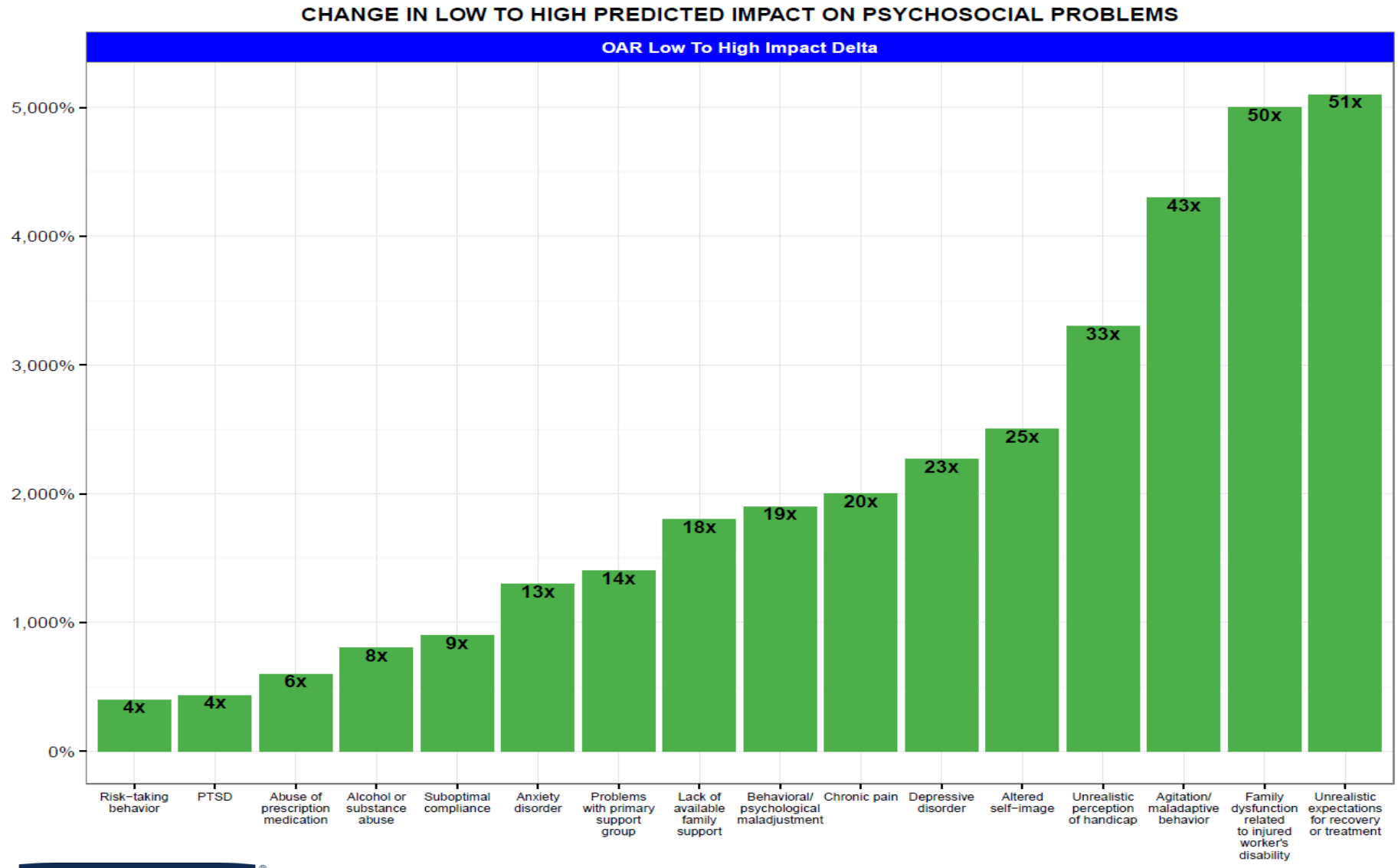
- Paradigm's Catastrophic Injury Database

Psychosocial-Behavioral and Mental Health Impact

- High
- Medium
- Low

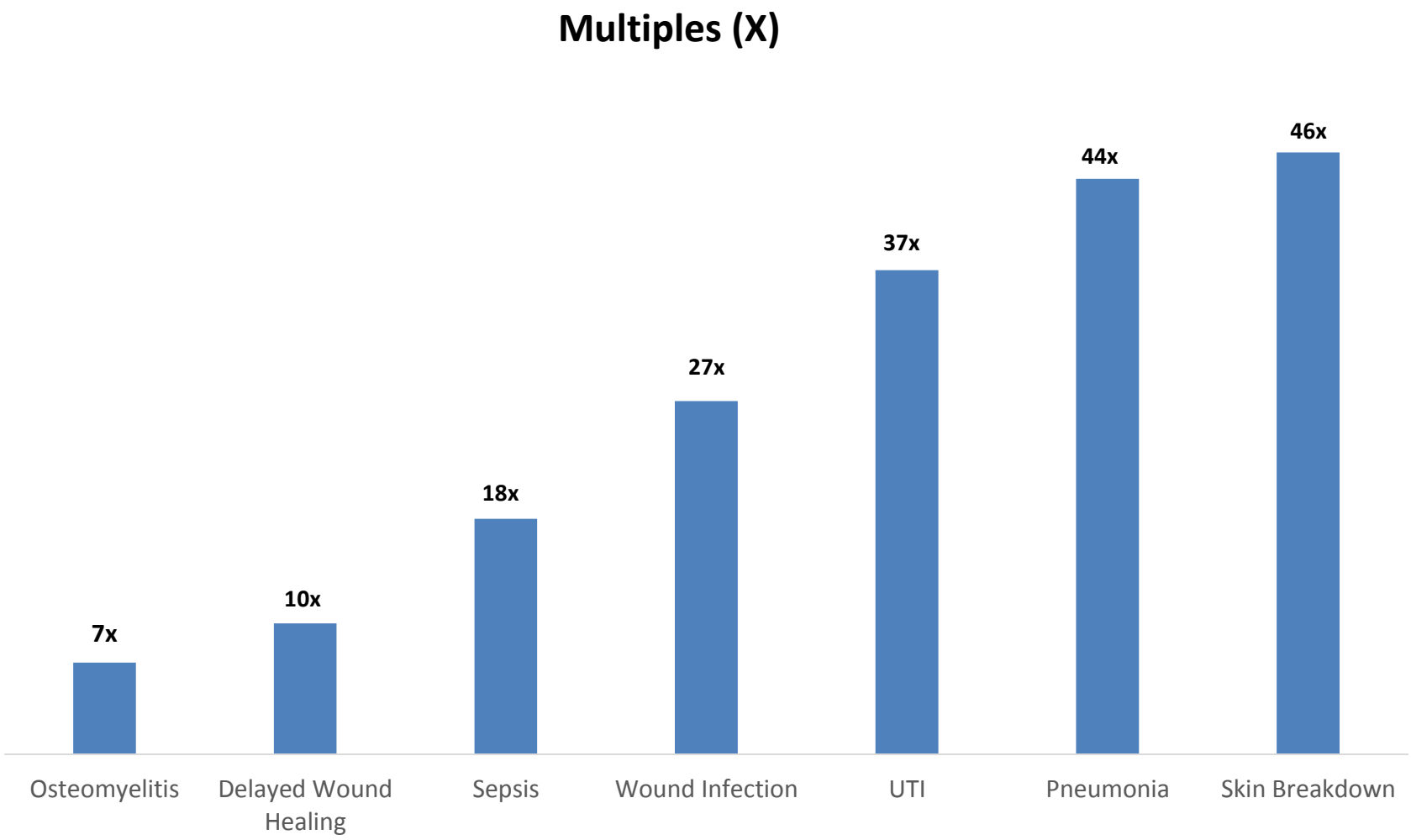
Predictive Model Validation

Percent difference between low impact vs. high impact psychosocial-behavioral calculator.



Predictive Model Validation

Percent difference between low impact vs. high impact.



Paradigm's Approach

Psychosocial and Mental Health Challenges

A multitude of these impact our injured workers.

- Pre-existing issues
- Adjustment to injury challenges
- Direct effects of injury (TBI)
- Family and cultural factors
  - Dysfunctional support system, history of abuse, enablement
- Environmental factors
  - Suboptimal housing, community access, social support

- Legal/financial factors
  - History of incarceration, litigation, financial strain
- Occupational issues
  - Work motivation, disincentives
- Chronic pain
- Coping skills and style
  - Resilience, cognitive mindset

What are the *impacts* of Psychosocial and Mental Health Challenges?

- Intensify and/or prolong ***treatment***
- Interfere with participation in ***rehab***
- Interfere with ability to manage/direct ***care***
- Increase ***costs***
- Result in suboptimal ***outcomes***

Managing Psychosocial and Mental Health Challenges in Trauma Patients

Paradigm's approach.

Assessment

- PSB Complexity Calculator
- Screening/Comprehensive Evaluations

Psychosocial Interventions

- Customized Plan (Injured Worker-centric)
- Implementation of evidence based interventions

Outcome Evaluation

Assessment

Record Review, Interview, Formal Evaluation:

- Identify any current emotional, adjustment or behavioral challenges, and/or pre-existing history of psychosocial red flags
  - Psychosocial-Behavioral Complexity Calculator
  - Is there marked distress?
  - Is there significant impairment in social, occupational or other areas of function?

Clarify pre/co-existing vs. injury-related conditions:

- Did the onset of symptoms correspond to the onset of the trauma?
- Were pre-existing symptoms/conditions exacerbated by the trauma?
- Relevant diagnoses
  - Trauma/stress-related disorders (e.g., Acute Stress Disorder, PTSD, Adjustment Disorders)
  - Psychological disorders due to other medical conditions
  - Somatic symptom and related disorders
  - Substance-related and addictive disorders

Psychosocial Interventions

Evidence-based psychotherapeutic treatments:

- Health and behavior interventions
- Cognitive Behavioral Therapy
- Mindfulness-based therapies
- Psycho-education
- Supportive psychotherapy
- Eye Movement Desensitization Reprocessing (EMDR)
- Family/caregiver interventions
- Self-help tools/apps
- TeleTherapy

Outcome Evaluation

Treatment efficacy

- Are there less intense/frequent self/family reports of distress?
- Are there demonstrable functional improvements in social, occupational and other areas?
- Is there evidence of greater resilience, post-traumatic growth?

Treatment endpoints

- Patient has met goals, ready for discharge
- Patient has declined further intervention
- Patient does not appear to be benefitting from treatment

Justification for ongoing treatment

- Chronic adjustment issues/symptoms still present
- Symptoms effectively managed/stable with maintenance treatment plan
- Decline (distress and/or function) observed when treatment withdrawn

Outcomes durability

- Plan for future care transitions to ensure continuity
- Secure long-term support systems
- Promote self-advocacy
- Relapse prevention
- Contingency planning

Paradigm Case Study

Demographics

- Single male, mid-30s
- Status post: severe TBI due to fall from ladder
- Pre-existing history of regular marijuana and alcohol use
- Live-in significant other of three years at time of injury
- Estranged from family of origin

Case Study

Paradigm management highlights.

Acute Recovery Phase

- **Assessment**
  - Paradigm team identified current psych challenges, relevant prior history and future risks
- **Intervention**
  - Paradigm team facilitated admission to acute neurorehab program
    - Emergence of TBI-related behavioral challenges
    - Superimposed upon presumed pre-existing personality/psych characteristics
    - Family conflicts escalated
  - Paradigm team advocated for transition to post-acute residential TBI program
    - After six weeks, discharged against recommendation, moved in with parents
    - Significant conflict, negative behaviors ensue

Case Study

Paradigm management highlights.

Post Acute Recovery Phase Interventions

Paradigm advocated strongly for readmission to post-acute residential setting

- Advocated for neuropsychological AND chemical dependency counseling
- Screened, communicated with providers, promote evidence-based tx approach
- Requested neuropsychological re-evaluation to determine capacity
- Promoted active engagement in decision-making re: long-term plans
- Encouraged SO engagement in counseling
- Engaged parents to facilitate their support
- Identified new providers (NP, chem dep) in target discharge location
- Scheduled evaluations to occur within one week of discharge

Case Study

Paradigm management highlights.

Maintenance/Long Term Recovery Phase Interventions

- Neuropsychology provider approved for individual/family health and behavior sessions
  - Expectation set for tapering frequency of visits
  - Anticipation of potential longer-term, low-frequency need
- Chemical dependency provider approved for short-term services
  - Expectation set for transition to community-based services for long-term support
- Paradigm team initiated support services for engagement in volunteer/pre-voc activities

Outcome Evaluation (ongoing):

- Regular monitoring for functional, behavioral stability
- Trials of tapering services when target goals met
- Consideration of need for resumption of services when declines evident
- Contingency planning to identify alternate care configuration, if needed in future

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Question and Answer Session

Submit your questions in the Q&A panel on the right of your screen.

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