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Beyond Case Management - Care Management as a Serious Incident and Fatality (SIF) Risk Control

Human Capacity, Return-to-Work, and the Missing Link in SIF Prevention

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Executive Summary

Serious Incident and Fatality (SIF) prevention has appropriately shifted attention toward high-energy hazards, critical controls, human performance, and organizational learning. Yet one variable in the SIF equation receives comparatively little attention: the functional capacity of the person interacting with the hazard.

Following injury or illness, pain, fatigue, medication effects, reduced mobility, cognitive distraction, psychological distress, and informal self-accommodation can alter how a worker perceives, responds to, and interacts with hazardous energy. A task that may be appropriately controlled for a fully capable worker may present a materially different risk when performed by someone whose functional capacity has temporarily changed.

The central argument of this paper is straightforward: proactive care management should be understood not merely as a downstream claims or disability process, but as a potential upstream SIF risk control.

Effective care management creates visibility into changing human capacity, facilitates timely treatment and recovery, establishes meaningful functional limitations, and controls the worker's reintroduction to occupational exposure. Return-to-work therefore becomes more than an administrative milestone. It becomes an exposure-management decision.

This paper proposes a shift from legacy case management toward holistic care management and introduces a Care-to-Resilience Model connecting early clinical engagement, verified functional capacity, controlled return-to-work, managed high-energy exposure, and reduced SIF potential.

The key premise is that SIF potential can increase when high-energy task demands exceed available human capacity. The practical implication is equally direct: control the energy, but also understand the capacity of the person who will interact with it.

FIGURE 1. THE CARE-TO-RESILIENCE MODEL

From Injury to Controlled Exposure and Restored Capacity



A Note on the Evidence

A substantial body of research supports relationships among pain and disability, depression, physical work demands, workplace factors, multidisciplinary coordination, accommodation, and return-to-work outcomes. A best-evidence synthesis of 56 low-risk-of-bias systematic reviews identified higher pain or disability, depression, higher physical work demands, and activity limitations among factors associated with poorer return-to-work outcomes, while return-to-work coordination and multidisciplinary interventions involving the workplace and stakeholders were associated with more favorable outcomes (Cancelliere et al., 2016).

Workplace intervention evidence also supports several mechanisms central to care management. Franche et al. (2005) found strong evidence that work accommodation offers and contact between healthcare providers and the workplace reduce work-disability duration, with moderate evidence supporting early workplace contact, ergonomic worksite visits, and a return-to-work coordinator.

However, the literature directly evaluating proactive care management as a control for Serious Incidents and Fatalities remains limited. This paper therefore advances a proposed risk-control mechanism: when injury or illness reduces functional capacity, and that reduced capacity intersects with high-energy work, SIF potential may increase. Care management may interrupt that pathway by identifying changes in capacity and translating them into appropriate task and exposure controls.

The Care-to-Resilience Model presented here should be understood as a proposed SIF-prevention framework grounded in established return-to-work, human-performance, and critical-risk principles—not as a claim that a direct statistical relationship between care management and SIF reduction has already been demonstrated.

1. Introduction: The Missing SIF Control

Despite decades of improvement in occupational safety and health, serious incidents and fatalities (SIFs) remain one of the profession's most persistent challenges. Organizations have become increasingly sophisticated in identifying high-energy hazards, implementing critical controls, learning from near misses, improving incident investigations, and designing systems that are more tolerant of human error. These developments are important. Yet one variable in the SIF equation receives comparatively little attention: the functional capacity of the person interacting with the hazard.

SIF prevention rightly asks whether hazardous energy has been identified and adequately controlled. But there is another question that should accompany it:

Does the worker interacting with that energy have the physical, cognitive, and psychological capacity to perform the work safely?

That question becomes particularly important following an injury or illness. Pain, fatigue, medication effects, reduced mobility, cognitive distraction, psychological distress, and informal self-accommodation can change how a worker perceives, responds to, and interacts with hazardous energy. A task that may be appropriately controlled for a fully capable worker may present a materially different risk when performed by someone whose functional capacity has temporarily changed.

This creates an important connection between two disciplines that have traditionally been treated separately: post-injury care management and SIF prevention.

Historically, case management has largely been viewed as a downstream administrative process. An injury occurs, medical treatment is coordinated, workers' compensation obligations are managed, restrictions are documented, and eventually the employee returns to work. In some organizations, aggressive case management also acquired a negative reputation because of its association with recordability management, claims-cost reduction, and perceived injury suppression.

This paper argues for a fundamentally different model: proactive care management should be understood as a potential upstream SIF risk control. Its purpose is not to hide injuries or prematurely return injured employees to productive work. Quite the opposite. Effective care management creates visibility into changing human capacity, facilitates appropriate treatment

and recovery, establishes clear functional limitations, and controls the worker's reintroduction to occupational exposure.

Serious incidents and fatalities are frequently associated with high-energy exposures (Hallowell, 2025). But hazardous energy does not exist in isolation. Workers interact with that energy through decisions, movement, perception, reaction, judgment, and task execution. When injury or illness degrades those capabilities, the relationship between task demand and human capacity changes.

SIF potential increases when high-energy task demands exceed available human capacity.

The objective is not to replace energy-based safety, critical controls, human performance, or traditional SIF prevention strategies. It is to identify an important dimension that complements them. We must control the energy. But we must also understand the capacity of the human being who will interact with it.

2. From Case Management to Care Management

Much of a traditional safety management system is organized around prevention. That emphasis is ethically appropriate, but prevention cannot be assumed to be perfectly predictive. Human beings are fallible, work is variable, and organizations cannot forecast every error, event, or exposure with certainty. For that reason, resilient safety systems must also develop the capacity to recover safely when prevention is incomplete.

Post-injury management is one such recovery mechanism. Traditional case management is commonly described as a collaborative process of assessment, facilitation, communication, advocacy, and use of available resources to address health needs and support return to work. In practice, it often requires coordination among the injured worker, employer, treating practitioners, external service providers, and claims or insurance organizations.

The problem is not necessarily the mechanics of case management. It is the way the discipline is frequently framed. The word case can reduce a human being to an administrative file, a claim number, a recordable event, or a cost center. When the process is measured primarily through claim closure, indemnity cost, recordability, or speed of return, it can unintentionally create incentives that are misaligned with recovery and safe work.

Care management changes the center of gravity. It treats recovery as a human and operational process. The objective remains a timely and sustainable return to productive life and work, but the route to that objective includes physical recovery, psychological wellbeing, functional capacity, appropriate accommodation, and deliberate management of exposure.

Research indicates that employer-supported return-to-work programs can materially shorten absence duration and that mental and emotional factors can be important determinants of

successful return to work (McLaren, Reville, & Seabury, 2010; McCrimmon & Oddy, 2006; Sullivan et al., 2006).

Case management administers an injury. Care management restores human capacity.

The semantic shift matters because the operational philosophy matters. A care-centered system should not ask only, 'How quickly can this claim be resolved?' It should ask, 'What does this person need to recover, what can this person safely do now, and how should work be designed until full capacity is restored?'

3. Human Capacity and the SIF Pathway

The renewed focus on SIF prevention is rooted in an important recognition: the mechanisms that produce minor injuries are not always the same mechanisms that produce life-altering or fatal outcomes. Contemporary SIF prevention therefore places greater emphasis on high-energy hazards and the controls that prevent uncontrolled exposure.

That emphasis is necessary, but it can remain incomplete if human capacity is treated as static. A worker's capacity is dynamic. Injury, illness, pain, sleep disruption, medication, restricted range of motion, emotional distress, and cognitive distraction can alter performance. These changes may affect reaction time, balance, situational awareness, judgment, movement, or the ability to execute an emergency response.

This does not mean that an injured worker is inherently unsafe. Nor does it justify excluding workers from meaningful work merely because they have restrictions. The point is more precise: the demands of the task must be matched to verified current capacity.

A worker who can safely perform administrative duties may not yet be ready for work at height. A worker who can walk and drive to work may not yet have the mobility required to escape an energized or line-of-fire exposure. A worker taking medication may have restrictions that matter little in one environment and substantially in another. Risk emerges from the interaction between capacity, task demand, and hazardous energy.

FIGURE 2. THE CAPACITY-DEMAND SIF RELATIONSHIP

Why Human Capacity Must Be Considered Alongside Hazardous Energy



The energy remains the primary hazard. Risk increases when task demands exceed verified current capacity.

A useful way to conceptualize this relationship is through three interacting variables: hazard energy, task demand, and available human capacity. Hazard energy describes the potential severity of the exposure. Task demand describes what the work requires physically, cognitively, and psychologically. Human capacity describes what the worker can safely and reliably bring to that task at that point in recovery.

The worker is not the hazard. The vulnerability emerges when task demands exceed available capacity in the presence of consequential energy. This distinction is critical because it prevents care management from becoming a rationale for blaming, excluding, or medically screening workers in place of controlling hazards.

Human capacity should never be used as a substitute for hazard control. It should be treated as one of the conditions under which the adequacy of exposure controls is evaluated.

A practical SIF relationship

High-energy exposure + capacity-demand mismatch = elevated SIF potential.

This relationship provides a useful bridge between energy-based safety and care management. The energy remains the primary hazard. Care management does not remove or substitute for critical controls. Rather, it helps ensure that the person assigned to interact with that hazard can do so within known and appropriately managed functional limits.

This is especially important during the recovery period, when informal workarounds can emerge. Workers may self-accommodate, supervisors may improvise restrictions, or teams

may assume that 'light duty' automatically means low risk. Those assumptions can conceal a mismatch between what the worker is capable of doing and what the task actually demands.

4. Proactive Care Management as an Upstream SIF Control

Proactive care management begins with early clinical engagement and continues through recovery, accommodation, and return to unrestricted work. Its safety value lies in maintaining visibility into human capacity before a degraded condition intersects with a high-energy exposure.

Untreated or poorly managed injuries can produce compensatory movement, delayed reaction, distraction, reduced situational awareness, or attempts to work around limitations. In environments involving mobile equipment, work at height, confined spaces, energized systems, suspended loads, or line-of-fire hazards, these changes can have consequences far greater than the original injury.

Poor care management can also lead to premature return to unrestricted duties, informal task modification, restrictions that supervisors do not understand, or worker self-accommodation that is invisible to the organization. These conditions may not increase a traditional lagging indicator immediately, but they can increase the probability that a worker encounters high energy without the capacity necessary to respond safely.

Proactive care management can reduce SIF potential by helping ensure task demands do not exceed verified worker capacity.

The implication is significant. A robust return-to-work protocol is not simply a disability or workers' compensation process. Where high-energy work is involved, it is a critical risk-management process. Functional restrictions must translate into task restrictions, and task restrictions must translate into exposure decisions.

The control is therefore not 'return the worker quickly.' The control is 'return the worker deliberately.' A high-quality care-management system should accelerate appropriate recovery while preventing the recovery process itself from creating a new pathway to serious harm.

5. The Care-to-Resilience Model

The Care-to-Resilience Model describes how post-injury care can be integrated into SIF prevention without confusing clinical care with operational control. Each stage has a distinct purpose, and no single stakeholder owns the entire pathway.

The model is intentionally sequential but not rigid. Recovery is rarely linear. Restrictions may change, symptoms may recur, and duties may need to be adjusted. The essential requirement is that changes in capacity are visible and translated into operational decisions.

The model also clarifies roles. Healthcare professionals determine clinical status and functional limitations. Employers determine the work that exists and the hazards associated

with it. Safety professionals help translate restrictions into exposure controls. Supervisors implement the work plan. Human Resources and claims professionals help ensure legal, employment, and benefit requirements are met. The worker remains an active participant throughout.

Care becomes a safety control when clinical information is translated into safe exposure decisions.

6. Ten Elements of Effective Care Management

A truly effective care-management system is not developed in a vacuum. It requires collaboration among the injured worker, employer, healthcare providers, claims or insurance professionals, supervisors, and—where appropriate—specialized care-management resources. The following ten elements synthesize the practical framework contained in the original manuscript.

A. Make early reporting easy and respond promptly.

Workers should understand the mutual benefit of reporting injuries and symptoms early. Reporting pathways should be simple, intuitive, and available when needed. Prompt organizational response reinforces trust and reduces delays in treatment. The purpose is not to convert every discomfort into a claim; it is to prevent uncertainty, delayed care, and avoidable worsening of a condition.

B. Use appropriate professional clinical resources.

Third-party telephonic care-management providers, occupational health clinics, or other qualified clinical resources can help triage non-life-threatening issues, coordinate treatment, and maintain continuity. Where a formal vendor relationship is not feasible, an established relationship with a competent occupational medical clinic can still improve communication and understanding of job demands.

C. Establish clear care-management protocols.

Organizations should define what happens after an injury is reported, who communicates with whom, how restrictions are received and interpreted, how follow-up occurs, and how escalation decisions are made. Clear protocols reduce improvisation at the moment when the worker and supervisor are most likely to need guidance.

D. Build a supportive reporting and recovery culture.

Workers should not feel abandoned, punished, or pressured after reporting an injury. Regular, appropriate communication can maintain connection and reduce uncertainty. Supportive culture also reduces the incentive to hide pain or self-accommodate—behaviors that can conceal meaningful changes in capacity.

E. Use stay-at-work strategies when safe and feasible.

Temporary adjustments may allow a worker to remain engaged without exceeding current capacity. Options can include modified workload, rest breaks, changes in task demand, schedule flexibility, or other temporary accommodations. These measures should be intentional and documented rather than improvised.

F. Make return-to-work proactive, but never premature.

Return to routine and meaningful activity can support recovery, but speed alone is not the objective. The goal is the earliest safe and sustainable return. A return-to-work plan should reflect current restrictions, foreseeable job demands, and the hazards the worker may encounter.

G. Design accommodations around verified capacity.

Accommodation should bridge the gap between temporary limitations and job demands. Effective accommodations are safe, individualized, flexible, and time-bounded where appropriate. Supervisors need enough authority and organizational support to implement them without being forced to choose between production and recovery.

H. Use data to inform recovery decisions.

Organizations commonly track TRIR, lost-time rates, and claim cost, but recovery-duration data, restriction trends, recurrent conditions, and task-specific accommodation outcomes can provide additional insight. External disability-duration and treatment guidelines may also inform planning when used appropriately and in conjunction with clinical judgment.

I. Integrate prevention, ergonomics, and wellness.

Care management should not operate as an isolated post-injury silo. Ergonomic assessment, early intervention, physical therapy, workplace safety training, and human and organizational performance principles can help prevent recurrence and improve the quality of recovery.

J. Integrate mental health into recovery.

Workplace injury can affect identity, independence, confidence, financial security, and perceived value. These effects can influence recovery and return to work. Effective care management should recognize psychological wellbeing as part of recovery rather than treating it as unrelated to the physical injury.

7. Medical Clearance Is Not Operational Readiness

A medical release and an operational readiness decision answer different questions. A healthcare provider evaluates the worker's clinical condition and may establish functional restrictions. The employer, however, must determine what the actual work requires and what hazards accompany it. A restriction can be medically appropriate yet operationally incomplete.

For example, a restriction such as “no lifting over 20 pounds” does not by itself establish whether a worker can safely climb an emergency-egress ladder, maintain three points of contact, respond to unexpected equipment movement, work at height, operate mobile equipment, enter a confined space, or perform work near energized systems. Those are job- and exposure-specific questions.

Functional capacity evaluations are widely used to assess readiness for work-related tasks, but systematic reviews identify limitations in predictive validity and psychometric performance. Evidence is insufficient to treat a functional capacity evaluation, standing alone, as proof that re-injury will be prevented (Mahmud et al., 2010; De Baets et al., 2018).

The practical implication is not that functional assessment lacks value. It is that clinical information must be translated into the context of actual work. The clinician understands the patient. Operations understands the task. Safety understands the exposure. Effective care management connects all three.

Medical clearance establishes what may be clinically permissible.

Operational readiness establishes what can be performed safely in the actual exposure environment.

8. Return-to-Work as Exposure Management

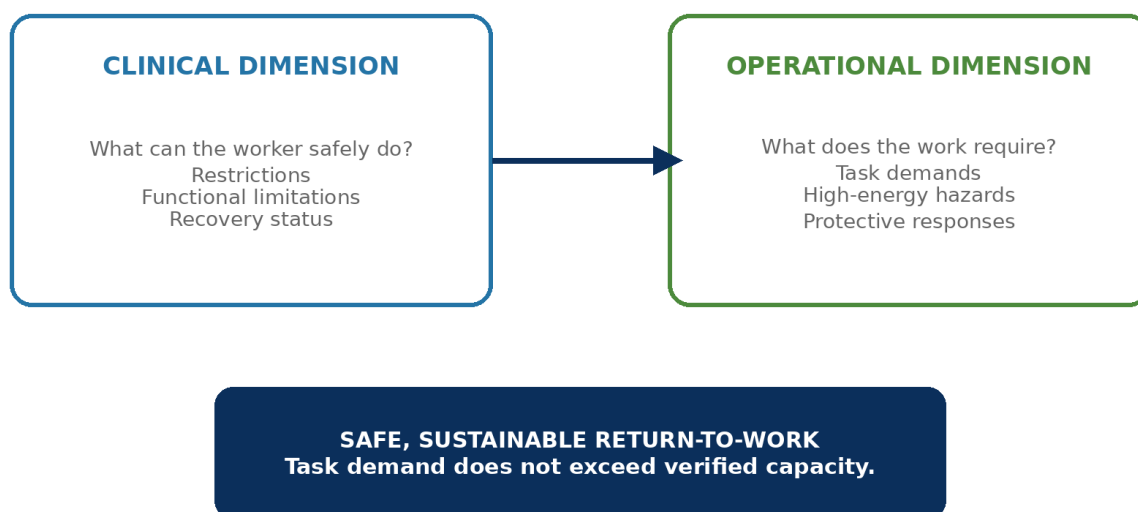
Return-to-work is often measured as an outcome: the employee is either off work, on restricted duty, or back to full duty. For SIF prevention, that binary framing is inadequate. The more important question is what exposures accompany the duties to which the worker is returning.

A restriction such as 'no lifting over 20 pounds' is clinically useful but operationally incomplete. A supervisor must still determine whether the worker will climb ladders, work near energized equipment, drive or operate mobile equipment, enter confined spaces, work around suspended loads, or perform tasks where rapid movement is an essential protective response.

The return-to-work decision therefore has two dimensions. The first is clinical: what can the worker safely do? The second is operational: what hazards and task demands are present in the work being assigned? Safe return occurs where those two dimensions are deliberately matched.

FIGURE 3. RETURN-TO-WORK AS EXPOSURE MANAGEMENT

Safe Return Requires Both Clinical and Operational Decisions



Three return-to-work failures that create risk

First, premature unrestricted return can place a worker back into high-energy work before capacity has been restored. Second, informal task modification can create work that appears easier but contains unrecognized critical exposures. Third, self-accommodation can hide limitations from the very people responsible for controlling the work.

These failures explain why 'light duty' should never be treated as synonymous with 'low risk.' A physically light task can still involve high-energy exposure. Conversely, some physically demanding work may be manageable when the relevant capacity is verified and the exposure is controlled.

Return-to-work is not merely a date. It is a controlled transition in exposure.

9. Mental Health, Recovery and Human Performance

The human-capacity question is also consistent with broader occupational safety evidence. A systematic review and meta-analysis of work schedules describes fatigue as a major risk factor for occupational accidents and injuries, reinforcing the principle that human performance is dynamic rather than fixed (Fischer et al., 2017). The relevance to care management is conceptual rather than diagnostic: conditions that alter attention, endurance, mobility, or response capability should be considered when matching recovering workers to consequential work.

The original manuscript emphasizes that workplace injury affects more than physical function. Research cited there associates depression and other psychological factors with return-to-work

outcomes following traumatic injury (McCrimmon & Oddy, 2006; Sullivan et al., 2006). Van Horn (2009) identifies losses of independence, control, pride, perceived value, and progress toward personal goals as factors that can accompany traumatic injury and contribute to anxiety or depressive symptoms.

These considerations matter for care in their own right. They also matter to human performance. Anxiety, distraction, loss of confidence, sleep disruption, and uncertainty can influence attention and decision-making. The safety profession should therefore resist an artificial separation between physical recovery, psychological recovery, and operational readiness.

This does not mean that safety professionals should diagnose or treat mental-health conditions. Clinical matters belong with qualified professionals. The organizational responsibility is to build a process that recognizes psychological wellbeing, facilitates appropriate resources, preserves dignity, and avoids creating unnecessary stress through poor communication or administrative indifference.

Maintaining appropriate connection with an injured worker can also protect the relationship between the worker and the organization. Extended absence can create isolation. Conversely, a structured and supportive recovery process can preserve belonging and make return to work less disruptive.

Human capacity is physical, cognitive, and psychological—not merely musculoskeletal.

10. When Care Management Fails

The consequences of ineffective care management extend beyond claim cost. The source manuscript cites a 2016 study in which participants associated with employers having nonexistent or ineffective return-to-work management were substantially less likely to return to work than those with effective programs, and longer intervention periods were associated with poorer return-to-work outcomes (Awang, Shahabudin, & Mansor, 2016).

From a SIF perspective, the more important concern is what happens during uncertainty. If restrictions are unclear, follow-up is inconsistent, and supervisors do not understand the worker's capacity, the organization can unintentionally create exposure through premature return, hidden limitations, or improvised work.

Ineffective care management can also increase medical and indemnity costs, prolong absence, increase insurance costs, affect experience-modification factors, damage morale, and strain the relationship between the worker and employer. These consequences matter, but they should not become the primary rationale for care.

The primary rationale is human. A person has been injured or become ill, and the organization has an opportunity to help that person recover without creating additional harm. Cost control should be an outcome of good care—not the definition of it.

The failure of care management is not simply a longer claim. It can be an unmanaged period of elevated vulnerability.

11. Cross-Functional Governance: Safety, HR and Clinical Care

Care management sits at the intersection of safety, Human Resources, occupational health, claims administration, legal requirements, supervision, and operations. That intersection can create understandable tension. Different functions are accountable for different risks, and none should be expected to operate outside its competence.

The solution is not for Safety to practice medicine or for Human Resources to make operational hazard decisions. The solution is disciplined role clarity.

Healthcare providers assess clinical status and communicate appropriate restrictions within applicable legal and privacy requirements. Human Resources and employment counsel help ensure that disability, accommodation, leave, privacy, and employment obligations are respected. Safety and operations evaluate task demands and hazardous exposures. Supervisors execute the work plan. Claims professionals manage applicable benefits and insurance processes.

Effective governance requires clear boundaries, cross-functional collaboration, and separation of responsibilities. Those principles should be formalized before an injury occurs rather than negotiated case by case during recovery.

A governance test

A mature organization should be able to answer four questions quickly: Who receives restrictions? Who translates them into task limitations? Who approves modified work? Who verifies that the work actually performed remains within those limitations?

If the answers are unclear, the organization does not yet have a care-management system; it has a collection of well-intentioned participants.

Clinical restrictions describe capacity. Operational leaders must translate capacity into controlled work.

12. Evidence From Practice

An instructive industry example comes from ExxonMobil Global Services Company, as reported by Daniel and Albert (2016). The reported experience described a more holistic care-management approach in an organization employing thousands of workers and contracted

personnel. Earlier reporting increased, including reporting of chronic musculoskeletal concerns before they became severe or debilitating.

Importantly, evidence supporting return-to-work coordination, accommodation, and functional assessment should not be conflated with direct evidence of SIF reduction. The latter remains a research gap. That gap is precisely why the framework proposed here is presented as a testable risk-control hypothesis rather than a demonstrated effect size.

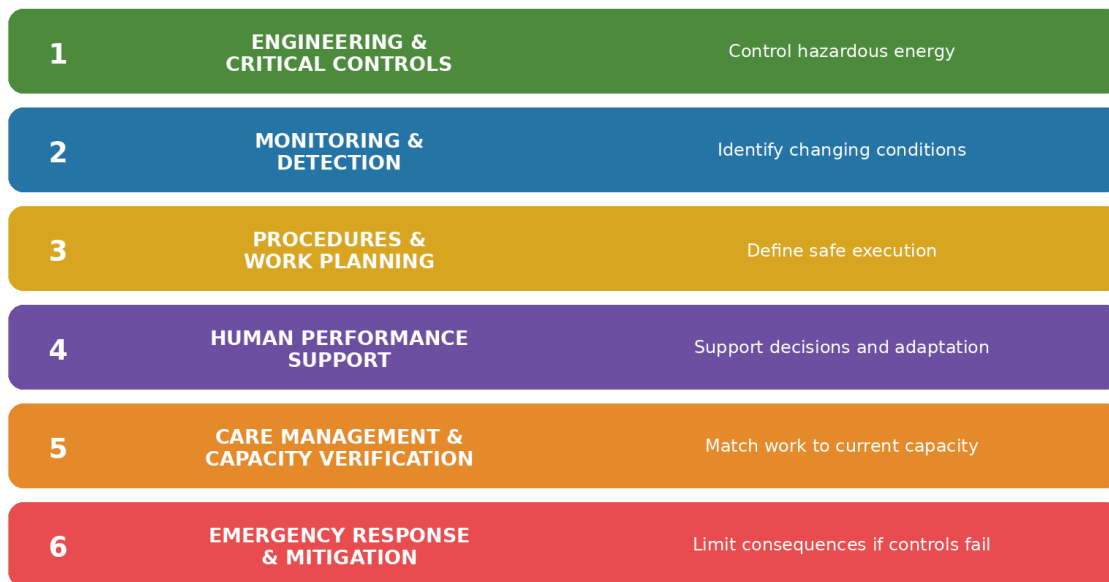
The counterintuitive outcome is important: the number of injury incidents reported by workers increased while OSHA-defined recordable injuries decreased substantially during the period described. This pattern is consistent with a healthy reporting culture in which increased visibility does not necessarily indicate deteriorating safety performance. It may instead indicate that concerns are being surfaced earlier, when intervention is more effective.

The evidence base connecting care management directly to SIF reduction remains less mature. The original manuscript acknowledges this limitation, and the distinction should remain explicit. The proposed SIF mechanism in this paper is therefore a risk-control argument supported by established principles of high-energy hazard management, functional capacity, return-to-work practice, and human performance—not a claim that a specific percentage reduction in SIFs has already been empirically demonstrated.

That limitation does not make the mechanism irrelevant. Safety practice routinely uses credible causal pathways to control catastrophic risk before enough fatal events accumulate to provide statistically convenient evidence. The appropriate next step is to measure the relationship more deliberately.

FIGURE 4. CARE MANAGEMENT AS A LAYER OF SIF PROTECTION

Human Capacity Complements - It Does Not Replace - Critical Hazard Controls



No single layer is perfect. Together they create resilience.

Research opportunity

Organizations implementing mature care-management systems should consider studying leading indicators such as time to first clinical contact, time to restriction clarification, percentage of modified-duty assignments reviewed for high-energy exposure, recurrence after return to work, unplanned changes in restrictions, and high-potential events involving workers in active recovery. Such measures could help test and refine the Care-to-Resilience Model.

13. Conclusion: Care Is a Control

The safety profession has made important progress by distinguishing serious incident and fatality potential from the mechanisms that produce less severe injuries. Energy-based approaches, critical controls, human performance, and organizational learning have all strengthened the way high-consequence risk is understood.

But SIF prevention cannot focus only on the hazard side of the interaction.

Every exposure involves a human being whose capacity can change. Injury, illness, pain, medication, reduced mobility, fatigue, cognitive distraction, and psychological distress can alter the relationship between the worker and the work. When those changes remain invisible, organizations can unintentionally place recovering workers into tasks whose demands exceed their current capacity.

That is why care management belongs in the SIF conversation.

Legacy case management has often been framed as a downstream administrative activity focused on claims, recordability, cost, and return-to-work dates. At its worst, that framing can create mistrust and the perception that the process exists primarily for the employer. Proactive care management represents a different philosophy. It begins with the wellbeing of the injured worker, supports recovery, makes functional capacity visible, and translates that capacity into deliberate decisions about work and exposure.

This does not make care management a substitute for critical controls. A worker's capacity should never be used to compensate for inadequate hazard control. The hierarchy remains clear: hazardous energy must be identified and controlled. But once those controls are established, organizations must also ensure that the person interacting with the work can safely perform the task within current functional limits.

Return-to-work should therefore be understood as a controlled transition, not simply a date on a claim file. Modified duty should be designed, not improvised. Restrictions should be translated into operational terms, not merely filed. Supervisors should understand the purpose of limitations, not work around them. Workers should be able to report pain, limitations, or changing symptoms without believing that honesty threatens their employment or reputation.

When these principles are integrated, care management becomes part of risk governance. It helps preserve human capacity during a period of elevated vulnerability and reduces the opportunity for a capacity-demand mismatch to intersect with high-energy hazards.

Care is not what happens after safety fails. Done well, care becomes part of how safety prevents the next failure.

The future of SIF prevention requires both sides of the equation. Organizations must continue to identify and control the energy capable of causing catastrophic harm. At the same time, they must understand the physical, cognitive, and psychological capacity of the people who interact with that energy.

Control the energy. Understand the capacity.

Evidence Base Supporting the Framework

Evidence domain	What research supports	What RP-002 proposes
Return-to-work factors	Pain/disability, depression, physical work demands, workplace factors, coordination, and multidisciplinary support influence RTW outcomes.	These factors can also matter when recovered capacity is matched to consequential work.

Workplace intervention	Accommodation, healthcare-workplace contact, early contact, ergonomic visits, and RTW coordination can reduce work-disability duration.	Care management should translate restrictions into deliberate task and exposure controls.
Functional capacity	FCEs can inform work-related capability, but reliability/predictive validity vary and evidence for preventing re-injury is limited.	Medical or functional clearance should not be treated as equivalent to operational readiness.
Fatigue/human performance	Fatigue is associated with occupational accident and injury risk.	Human capacity is dynamic and should be considered when assigning high-energy work during recovery.
SIF prevention	High-energy hazard and critical-control principles address catastrophic potential.	Capacity-demand mismatch is proposed as an additional vulnerability within a high-energy SIF pathway.

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About the Author

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The views expressed in this publication are solely those of the author.

Appendix A - Questions Every Leader Should Be Asking

- Is early injury and symptom reporting simple, trusted, and actively supported?
- Does the organization have a defined process for early clinical engagement and follow-up?
- Who receives functional restrictions, and who translates them into task limitations?
- Are modified-duty assignments reviewed for high-energy exposure rather than labeled generically as light duty?
- Do supervisors understand what restrictions mean operationally and when to escalate questions?
- Are workers able to report changing symptoms or limitations without fear of negative consequences?
- Are return-to-work decisions based on verified capacity as well as operational task demand?
- Are physical, cognitive, and psychological factors considered in recovery and work planning?
- Does the organization track recurrence, restriction changes, and high-potential events involving workers in active recovery?
- Can Safety, HR, Operations, clinical providers, and claims professionals describe their respective roles without overlap or ambiguity?



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Preventing Serious Incidents and Fatalities

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