

An **Atlas injury Prevention Solutions** White Paper



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Injury Prevention through Early Intervention: Regulations and Results

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Introduction & Overview

Background information is provided on the prevalence and scope of injuries and illness within industry. An emerging strategy of Early Intervention is introduced as a philosophical approach to curb the scope and associated costs of recordable injuries. Key to this discussion is the understanding of OSHA regulatory law.

Regulatory Analysis

The OSHA regulatory law is complex and multi-faceted. A comprehensive review of applicable regulations and their implications are presented as they pertain to Early Intervention programming.

Early Intervention Outcomes

A literature review supporting the use of Early Intervention is provided along with outcomes of several organizations.

Conclusions

A review of the relationships learned and considerations.



INTRODUCTION

Organizations across the country utilize a variety of strategies to mitigate the risk of workplace injuries and illnesses and their associated costs. Workers' Compensation claims in the United States consistently exceed 1.5 million injuries at an estimated cost exceeding \$50 billion per year.¹ These costs are a significant drain on organizational profitability. Therefore, a growing focus for businesses is the prevention of workplace injuries and illnesses.

One particular strategy that is gaining momentum is Early Intervention (or Injury Triage). Early Intervention programs emphasize the early reporting of soreness, discomfort, and pain prior to a major dysfunction or documented injury. Quite simply, the strategy addresses an ache before it becomes a pain and a stress before it becomes a strain. Programs operate under the umbrella of "evaluation and first aid" as defined by the Department of Labor, Occupational Safety & Health Administration (OSHA), versus addressing the risk through traditional physician consultation. These programs are typically staffed by licensed physical therapists or certified athletic trainers, here forward referred to as onsite providers, who have advanced training in industrial care and ergonomics.

Key to utilizing an Early Intervention strategy in your organization is your understanding of what constitutes a recordable injury and what OSHA will allow (and not allow) under the umbrella of first aid. Such understanding is paramount when setting the compliance boundaries of your program. This paper will examine current OSHA regulations and interpretation letters for services to define where the compliance boundaries lie, and to what degree an organization can operate within a safe harbor of compliance while still working toward their goals of reducing recordable injuries and illnesses. Finally, this paper will discuss Early Intervention outcomes to help the reader better understand the potential benefit of the strategy.



OVERVIEW: EARLY INTERVENTION PROGRAM

An Early Intervention strategy is a scalable program based on the needs of the organization. How many hours per week and when each program will run will

¹ National Safety Council. *Accident Facts*. Chicago: National Safety Council; 1991:34-35.

vary based on the number of employees, any temporary employment surges (i.e., holiday staffing), shift start times, and shift rotations. Organizations may utilize the services of the onsite provider, requiring from as little as 2-4 hours per week up to a full-time engagement.

The primary focus of the Early Intervention program is the onsite provider working one-on-one with an employee to determine the status of a potential musculoskeletal injury or illness, collaborating with the employee and associated manager on ergonomic improvements and risk mitigation strategies. The time onsite varies depending on the specific needs of the organization. Beyond the primary role the onsite provider may perform any number of additional functions, including:

- Instructing group stretching/warm-up exercises
- Training managers and staff on material handling best practices
- Job coaching on postural awareness and work techniques
- Conducting material handling audits
- Performing job demands analysis
- Directing ergonomics risk assessments
- Performing wellness activities

The services cross the breadth of injury prevention, health & wellness, safety, and ergonomics.



REGULATION ANALYSIS

What is considered a recordable injury or illness?

The construct for the understanding of “evaluation and first aid” under the umbrella of OSHA is defined in the Code of Federal Regulations (Standard - 29 CFR). Specifically, **PART 1904.7 -- Recording and Reporting Occupational Injuries and Illnesses** defines what is considered an injury or illness. The General Recording Criteria² states:

1904.7(a)

Basic requirement. You must consider an injury or illness to meet the general recording criteria, and therefore to be recordable, if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general

² https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9638

recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.

Simply stated, an injury or illness exists and is recordable if medical treatment beyond first aid takes place, or if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional. While a diagnosis is understandable and fairly straightforward, the question of what is considered medical treatment is more nebulous and is therefore critical to understand. OSHA defines medical treatment as follows:

1904.7(b)(5)(i)

What is the definition of medical treatment? "Medical treatment" means the management and care of a patient to combat disease or disorder. For the purposes of Part 1904, medical treatment does not include:

- **1904.7(b)(5)(i)(A)**
 - Visits to a physician or other licensed health care professional solely for observation or counseling;
- **1904.7(b)(5)(i)(B)**
 - The conduct of diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications used solely for diagnostic purposes (*e.g.*, eye drops to dilate pupils); or
- **1904.7(b)(5)(i)(C)**
 - "First aid" as defined in paragraph (b)(5)(ii) of this section.

As noted above, Section **1904.7(b)(5)(i)(A)**, establishes that an evaluation by a physician, licensed physical therapist or certified athletic trainer, in and of itself, does not trigger a recordable injury or illness.

What types of treatment are considered acceptable first aid?

Section **1904.7(b)(5)(ii)** (below) defines the parameters of first aid that can be deployed under the auspices of an Early Intervention program. The items highlighted in **yellow** are critical for program implementation and compliance:

1904.7(b)(5)(ii)

What is "first aid"? For the purposes of Part 1904, "first aid" means the following:

- **1904.7(b)(5)(ii)(A)**
 - Using a non-prescription medication at nonprescription strength (for medications available in both prescription and non-prescription form, a recommendation by a physician or other licensed health care

professional to use a non-prescription medication at prescription strength is considered medical treatment for recordkeeping purposes);

- **1904.7(b)(5)(ii)(B)**
 - Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment);
- **1904.7(b)(5)(ii)(C)**
 - Cleaning, flushing or soaking wounds on the surface of the skin;
- **1904.7(b)(5)(ii)(D)**
 - Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™ (other wound closing devices such as sutures, staples, etc., are considered medical treatment);
- **1904.7(b)(5)(ii)(E)**
 - Using hot or cold therapy;
- **1904.7(b)(5)(ii)(F)**
 - Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are considered medical treatment for recordkeeping purposes);
- **1904.7(b)(5)(ii)(G)**
 - Using temporary immobilization devices while transporting an accident victim (*e.g.*, splints, slings, neck collars, back boards, etc.).
- **1904.7(b)(5)(ii)(H)**
 - Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister;
- **1904.7(b)(5)(ii)(I)**
 - Using eye patches;
- **1904.7(b)(5)(ii)(J)**
 - Removing foreign bodies from the eye using only irrigation or a cotton swab;
- **1904.7(b)(5)(ii)(K)**
 - Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
- **1904.7(b)(5)(ii)(L)**
 - Using finger guards;
- **1904.7(b)(5)(ii)(M)**
 - Using massages (physical therapy or chiropractic treatment are considered medical treatment for recordkeeping purposes); or
- **1904.7(b)(5)(ii)(N)**
 - Drinking fluids for relief of heat stress.³

³ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9638

Interpreting the OSHA Standard more closely, the rules regarding first aid allow an onsite provider to:

1. Discuss the use of over-the-counter, non-prescription medication at nonprescription strength, (i.e., anti-inflammatory drugs such as Motrin per label instructions)
2. Ice for inflammation / Heat for flexibility.
 - a. **Section 1904.7(b)(5)(ii)(e)** provides that the definition of "first aid" includes using "hot or cold therapy". OSHA stated in the 2001 preamble to the final rule that hot and cold treatment is first aid regardless of the number of times it is applied, where it is applied, or the injury or illness to which it is applied (see, 66 Fed. Reg. 5990). It is OSHA's judgment that hot and cold treatment is simple to apply, does not require special training, and is rarely used as the only treatment for any significant injury or illness. Examples of heat therapy include compresses, soaking, and non-prescription skin creams/lotions for local relief. On the other hand, please be aware that whirlpool treatments and ultrasound therapies are both considered forms of physical therapy, and are therefore medical treatment for purposes of OSHA recordkeeping.⁴
3. Use of non-rigid splints
 - a. Wrist / thumb splints
 - b. Elbow supports
 - c. Knee sleeves
 - d. Ankle supports
 - e. Kinesio-Taping
 - i. Pursuant to 29 CFR 1904.7, first aid treatment includes "any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc." The use of kinesiology tape and other types of elastic taping is included within the definition of first aid treatment, and thus the use of such tape alone would not be considered medical treatment.⁵
4. Use of massage limited to soft tissue mobilization techniques
 - a. OSHA believes massages are appropriately considered first aid and has included them as "item M" in the final rule's first aid list. However, physical therapy or chiropractic manipulation are treatments used for more serious injuries, and are provided by licensed personnel with advanced training and therefore rise to the level of medical treatment beyond first aid.⁶

(It should not be construed from the above notation that physical therapists and chiropractors cannot provide massage. This specific notation is

⁴ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28316

⁵ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=29516

⁶ **Federal Register** /Vol. 66, No. 13 / Friday, January 19, 2001 /Rules and Regulations; Page 5592.

speaking to physical therapy and chiropractic interventions beyond massage.)

A further clarification on first aid and who delivers the service is provided below:

- **1904.7(b)(5)(iii)**
 - *Are any other procedures included in first aid?*
 - No, this is a complete list of all treatments considered first aid for Part 1904 purposes.

Table 1: Complete Listing of First Aid Treatments
(Items highlighted in Yellow are pertinent to Early Intervention)

Complete Listing of First Aid Treatments		
First Aid Treatment: 1904.7 (5)(ii)(A)-(N)	A	Using a non-prescription medication at nonprescription strength
	B	Administering tetanus immunization
	C	Cleaning, flushing or soaking wounds on the surface of the skin
	D	Using wound coverings; bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™
	E	Using hot or cold therapy
	F	Any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.
	G	Temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.)
	H	Drilling a fingernail or toenail to relieve pressure, or draining fluid from a blister
	I	Using eye patches
	J	Removing foreign bodies from the eye using only irrigation or a cotton swab
	K	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means
	L	Using finger guards
	M	Using massage
	N	Drinking fluids for relief of heat stress

- **1904.7(b)(5)(iv)**
 - *Does the professional status of the person providing the treatment have any effect on what is considered first aid or medical treatment?*
 - No, OSHA considers the treatments listed in **1904.7(b)(5)(ii)** of this Part to be first aid regardless of the professional status of the person providing the treatment. Even when these treatments are provided by a physician or other licensed health care professional, they are considered first aid for the purposes of Part 1904. Similarly, OSHA considers treatment beyond first aid to be

medical treatment even when it is provided by someone other than a physician or other licensed health care professional.

As noted in OSHA Standard Section **1904.7(b)(5)(iv)** the professional status of the person providing the treatment is important to understand. Whether treatment is provided by a physical therapist, athletic trainer, nurse, or physician, in the eyes of OSHA the administration of first aid interventions are treated equally.

What are the considerations of employer-assigned work restrictions? How do they relate to recordable vs. non-recordable injuries and illnesses?

Work restrictions under OSHA do not necessarily trigger a recordable injury or illness event. General Recording Criteria: Additional Guidance⁷ as follows:

Question 7-19. Does the employer have to record a work-related injury and illness, if an employee experiences minor musculoskeletal discomfort, the health care professional determines that the employee is fully able to perform all of his or her routine job functions, but the employer assigns a work restriction to the injured employee?

- As set out in Chapter 2, I., F. of the Recordkeeping Policies and Procedures Manual (CPL 2-0.131) a case would not be recorded under section 1904.7(b)(4) if 1) the employee experiences minor musculoskeletal discomfort, and 2) a health care professional determines that the employee is fully able to perform all of his or her routine job functions, and 3) the employer assigns a work restriction to that employee for the purpose of preventing a more serious condition from developing. If a case is or becomes recordable under any other general recording criteria contained in section 1904.7, such as medical treatment beyond first aid, a case involving minor musculoskeletal discomfort would be recordable.

Therefore, work restrictions or “Protective Limitations” may be employed for individuals with minor musculoskeletal discomfort without triggering a recordable injury or illness as long as the employee is able to fully perform all of the job’s “essential functions”. By definition, essential functions are the fundamental duties of a job, not the marginal duties of a job.

A job duty is an essential function if any of the following are true:

- The reason the job exists is to perform that function. For example, an essential function of a pilot is to fly planes.
- Only a few employees can perform the function.

⁷ <https://www.osha.gov/recordkeeping/entryfaq.html>

- Only a few employees can perform the function. The function is so highly specialized that the employer hires people into the position specifically because of their expertise in performing that function.⁸

Therefore, this interpretation of work restrictions and essential functions makes it incumbent upon the employer to have current and validated essential functions for each of its jobs within a facility or work environment.

How does the use of exercise impact whether a case is Recordable or Non-recordable? Where do the boundaries lie?

It is critical to have a full understanding of the use of exercise within the workplace. Under the circumstances of an employee who exhibits signs or symptoms of a work related injury, the use of exercise would be deemed medical treatment. Thus, it is a recordable case.

To fully understand the limits of exercise in the workplace one must examine OSHA's Letter of Interpretation related to the issue of exercise. OSHA's initial clarification on the use of exercise occurred on May 21, 2010 through a Letter Interpretation to Dr. Betsy Buehrer (3M Corporate Occupational Medicine) and Mr. Michael Nash (3M General Counsel). An excerpt from the Buehrer / Nash letter includes the following:

Dear Dr. Buehrer and Mr. Nash,

Thank you for your February 18, 2010 letter to the Occupational Safety and Health Administration (OSHA) regarding OSHA's recordkeeping regulation contained in 29 CFR Part 1904 - Recordkeeping and Reporting Occupational Injuries and Illnesses. In an effort to provide you with prompt and accurate responses, we developed and continue to refine a set of Frequently Asked Questions (FAQ), in addition to maintaining a log of Letters of Interpretation (LOI) on the OSHA Recordkeeping we site.

Your letter requests an interpretation relating to exercises recommended for a short period of time by an on-site health care professional when an employee is experiencing minor pain that has been determined to be work-related. Specifically, you ask if exercise is considered medical treatment as defined in OSHA's recordkeeping regulations.

If a physician or licensed health care professional recommends therapeutic exercise in response to a work-related injury or illness, the case is considered to involve medical treatment and the case is recordable.⁹

⁸ <http://www.nolo.com/legal-encyclopedia/essential-job-functions-under-the-ada.html>

⁹ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27674

Further clarification on the use of exercise was provided through a May 20th, 2011, Letter of Interpretation to Mr. Paul Bragenzer. An excerpt from the Bragenzer letter:

OSHA discussed the issue of therapeutic exercise in the preamble to the final rule revising OSHA's injury and illness recordkeeping regulation. See, 66 FR 5992, January 19, 2001. OSHA stated that it considers therapeutic exercise as a form of physical therapy and intentionally did not include it on the list of first aid treatments in **Section 1904.7(b)(5)(ii)**. **Section 1904.7(b)(5)(ii)(M)** states that physical therapy or chiropractic treatment are considered medical treatment for OSHA recordkeeping purposes and are not considered first aid. **Section 1904.7(b)(5)(iii)** goes on to state that the treatments included in **Section 1904.7(b)(5)(ii)** is a comprehensive list of first aid treatments. Any treatment not included on this list is not considered first aid for OSHA recordkeeping purposes.¹⁰

Further Clarification: ...Exercises that amount to self-administered physical therapy, and are normally recommended by a health care professional who trains the worker in the proper frequency, duration and intensity of the exercise. Physical therapy treatments are normally provided over an extended time as therapy for a serious injury or illness, and OSHA believes that such treatments are beyond first aid and that cases requiring them involve medical treatment.¹¹

Please be aware that if a treatment is administered as a purely precautionary measure to an employee who does not exhibit any signs or symptoms of an injury or illness, the case is not recordable. For a case to be recordable, an injury or illness must exist. For example, if, as part of an employee wellness program, an ATC recommends exercise to employees that do not exhibit signs or symptoms of an abnormal condition, there is no case to record. Furthermore, if an employee has an injury or illness that is not work-related, (e.g., the employee is experiencing muscle pain from home improvement work) the administration of exercise does not make the case recordable either.¹²

At first blush, it would appear providing an employee exercise drives a recordable event. However, it is critical to this discussion on exercise to fully understand the definition of signs or symptoms of an injury or illness. Given the typical types of concerns faced within an Early Intervention program, this paper will focus this discussion on musculoskeletal injuries and illnesses.

¹⁰ https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27698

¹¹ Preamble Discussion: Section 1904.7 (66 FR 5968-5998, Jan. 19, 2001)

¹² https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27698

Signs of a musculoskeletal injury or illness are indications the provider of care can sense when attending to an injured person (e.g. the things that the provider can see, hear and/or feel).

Examples of signs of a musculoskeletal injury or illness typically include:

- Joint pain
- Tenderness at a specific point
- Swelling or warmth
- Bruising
- Reduced range of motion
- Comparative weakness (right vs. left)
- Joint instability testing
- Neurologic examination
- Special tests associated with specific body parts (i.e., Tinel Sign, Phalen Sign, Finkelstein Test)

(A comprehensive listing of the ***Examination Skills of the Musculoskeletal System*** is available from Robert Sallis, MD, FAAFP, FACSM, Department of Family Medicine, Kaiser Permanente Medical Center, Fontana, California¹³.)

Conversely, symptoms of an injury or illness is information transferred by the injured person to the care provider (e.g. what he or she says to the care provider).

Examples of symptoms of a musculoskeletal injury or illness could include:

- *"My knee feels unstable."*
- *"I have pain and numbness down my lateral calf."*
- *"I have tingling in my thumb and index finger."*

Symptoms, as described directly above have a high correlation to positive signs of a musculoskeletal injury and should be considered accordingly. However, quite often employees speak to varying levels of fatigue or discomfort.

- *"My arm feels tired."*
- *"My back is fatigued at the end of the day."*
- *"My knee is sore."*

¹³ Robert Sallis, MD, FAAFP, FACSM, Depart. of Family Med., Kaiser Permanente Medical Center, Fontana, CA:
http://www.ucdenver.edu/academics/colleges/medicalscool/departments/familymed/education/fellowship/spo_rtsmedfellow/Documents/MS%20exam.pdf

Research indicates that the continuum of pain is broad-reaching and based on past personal interpretation and experiences. Along that continuum, employees speak of their symptoms through a broad range of descriptors including:

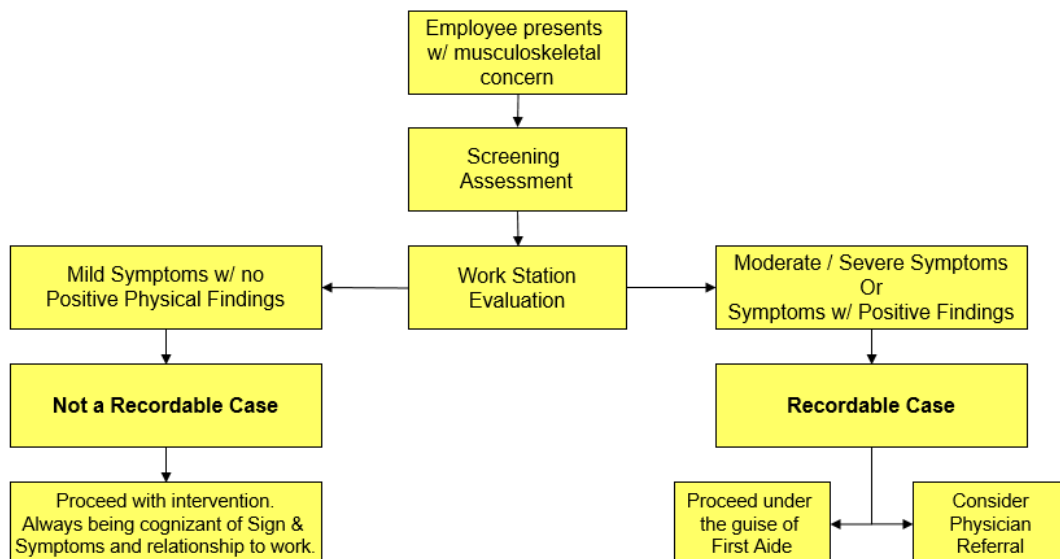
Tired → Fatigued → Heaviness → Soreness → Ache → Twinge → Discomfort → Throb → Distress → Pain

This leaves the question onsite providers are often confronted with: Where along this continuum of descriptors is the triggering point for a recordable injury or illness? With no specific direction on this topic from OSHA, it is imperative to take a comprehensive review of the employee’s concerns as it relates to their history and the physical findings of the musculoskeletal assessment.

It is hard to support the notion of a recordable injury or illness with a complaint of nominal symptoms in the absence of positive physical findings on exam. Conversely, it is imperative to appropriately identify an injury or illness as recordable when presented with moderate to severe symptom and / or positive physical findings on exam.

The Flow Chart below provides a viable and practical approach to the consideration of recordable injuries and illnesses in the workplace. Given the course of action to the left (Not a Recordable Case), providing exercises to an employee is acceptable. However, it is incumbent on the onsite provider to periodically re-assess the employee’s concerns and musculoskeletal exam to make certain that symptoms have not increased and physical findings remains absent. If a transition has taken place and symptoms have increased or physical findings are now present, the case would then become recordable by definition.

Diagram 1: Determinants of a Musculoskeletal Recordable Case





EARLY INTERVENTION OUTCOMES

The outcomes derived from an Early Intervention program can be dramatic for an organization. Without a systematic approach for the management of potential musculoskeletal injuries and illnesses, organizations typically default to the traditional medical model and all of the potential perverse financial motivators that have been documented within the available literature. Given that the Early Intervention model does not provide for any level of financial benefit for providing more tests, more measures or more interventions, it has a higher probability of doing exactly what is needed for the employee; nothing more, nothing less.

Early Intervention: Making the Case

A literature review of three professional articles demonstrate the benefit of Early Intervention programming for an organization. Though not categorically reflective of the Early Intervention program model previously described, these outcomes demonstrate the impact of an Early Intervention program on employees with the potential for a musculoskeletal injury or illness.

In an article published in *The Journal of the American College of Occupational and Environmental Medicine* (2000), Zigenfus et al. investigated Early Intervention and its effect on treatment outcomes. The treatment efficacy was measured by number of physician visits, case duration, duration of restricted work, and days away from work. One group was seen within the first two days of injury. A comparison group had treatment delayed for two to seven days. A third group had treatment delayed from eight to 187 days. The results found significant differences between the early intervention group and the other two groups. Physician visits, case duration, and restricted workdays were all less prevalent in the early intervention group. Days away from work were found to be significantly longer in the group that delayed treatment the longest.¹⁴

In a 2003 study, Gatchel et al. conducted a one-year prospective study looking at identifying patients that are at higher risk for chronicity. The patients were randomly assigned to an Early Intervention group or a non-intervention group. There was another low-risk group that did not receive intervention in order to provide a comparison. The conclusion: there were statistically fewer incidences of chronic

¹⁴ Zigenfus g, Yin J, Giang G, Fogarty W. Effectiveness of Early Physical Therapy in the Treatment of Acute Low Back Musculoskeletal Disorders. *J occupational environ medical.* 2000; 42:35-42.

pain disability across a wide range of criteria in the early intervention group. These included work, healthcare utilization, medication use, and self-report of pain level.

All subjects studied were less than eight weeks post injury, were full-time employees, and fell into high or low risk for chronicity. The average amount of time since injury among the participants was three-to-eight weeks. The findings showed that the early intervention group was more likely to return to work and less likely to be taking narcotic analgesics or psychotropic medications. The non-intervention, high-risk group displayed significantly more symptoms of chronic pain. Cost comparison was also impressive: the intervention group on average cost \$12,721 per patient per year compared to \$21,843 with inclusion of cost of early intervention included in first group.¹⁵

In a 2015 study, Childs et al. published their findings of Early Intervention in the scientific journal BMC Health Services Research. Outcomes demonstrated that early and guideline-adherent physical therapy following an initial episode of acute, nonspecific low back pain (LBP) resulted in substantially lower costs and reduced use of health care resources over a two-year period. The study analyzed 122,723 patients who went to a primary care physician following an initial LBP episode and received physical therapy within 90 days. Of these, 24% (17,175) received early physical therapy (within 14 days) that adhered to guidelines for active treatment. During a two-year time period, these patients made significantly less use of advanced imaging, lumbar spinal injections, lumbar spine surgery, and opioids than did patients in other combinations of timing and adherence. Early physical therapy patients also had 60% lower LBP-related costs as compared to 33.5% (23,993) of patients who had delayed and adherent physical therapy (between 14 and 90 days).¹⁶

Outcomes of Early Intervention Programs

Table 2 is a compilation of Early Intervention Measures & Metrics for three organizations, a total of seven individual facilities, involved in manufacturing and warehousing. Total head count for these seven facilities is over 3,000 employees. The number of hours per week committed by these organizations to the Early Intervention program vary; the weekly hours range from 4 hours a week to 16 hours

¹⁵ Gatchel RJ, Polatin PB, Noe C, Gardea M, Pulliam C, Thompson J. Treatment and Cost-Effectiveness of Early Intervention for Acute Low-Back Pain Patients: A One Year Prospective Study. *J Occup Rehabil.* 2003;13(1):1-9.

¹⁶ Childs JD, Fritz JM, Wu SS, Flynn TW, Wainner RS, Robertson EK, Kim FS, George SZ. Implications of early and guideline adherent physical therapy for low back pain on utilization and costs. *BMC Health Services Research* (2015) 15:150.

per week depending on the need of the individual facility. Total aggregate hours amongst all seven facilities is 56 hours per week.

Table 2: Compilation of Early Intervention Measures & Metrics
3 Organizations / 7 Facilities

Early Intervention Metrics - Total All Sites							
Jan - Oct 2015							
Month	* Total Cases this month	Cases Resolved	% Resolved	Convert to Recordable	Came to "Triage" as a Recordable	Resigned/ Terminated	Total Resolved
January	21	18	86%	1	1	1	95%
February	10	7	70%	1	0	2	90%
March	10	9	90%	0	0	1	100%
April	15	11	73%	2	1	2	93%
May	18	16	89%	0	0	0	89%
June	12	10	83%	2	0	1	92%
July	36	28	78%	1	0	1	81%
August	45	31	69%	0	0	1	71%
September	47	37	79%	1	0	1	81%
October	48	38	79%	2	2	0	83%
November	0	0	0%	0	0	0	0%
December	0	0	0%	0	0	0	0%
Total	262	205	78%	10	4	10	84%

As Table 2 indicates, for YTD 2015, a total of 262 individuals have sought out Early Intervention services within the seven facilities. Of those 262 individuals, 78% (205 individuals) were managed within the program. Additionally, ten individuals converted to a recordable injury as a result of signs and symptoms, 4 came into the program as a recordable injury and ten were terminated or left employment. The remaining 33 individuals remain in the program, carrying over to the next month. These individuals are not yet resolved, nor converted to a recordable injury.

Two of the articles referenced above provide a glimpse into the potential cost savings / cost avoidance an organization may experience when utilizing an Early Intervention program. Taking a very conservative approach and discounting the

associated costs for pharmaceuticals and lost wages provide us a reasonable insight to the potential savings / cost avoidance an organization may experience.^{17,18}

Table 3 below demonstrates the cost savings of a large transportation organization. Early Intervention services are provided at 13 of their facilities to an employee base of ≈ 25,000 workers.

Table 3: Early Intervention Cost Savings

Early Intervention Savings		
	Q3 2015 All Associates	YTD 2015 All Associates
Injury Screens:	510	1,496
Estimated Direct Savings Per Screen:	\$1,128	\$1,128
Injury Screen Savings:	\$575,280	\$1,687,488
* Reference: Gatchel RJ, Polatin PB, Noe C, Gardea M, Pulliam C, Thompson J. Treatment and Cost-Effectiveness of Early Intervention for Acute Low-Back Pain Patients: A One Year Prospective Study. <i>J Occup Rehabil.</i> 2003;13(1):1-9.		
** Reference: Childs JD, Fritz JM, Wu SS, Flynn TW, Wainner RS, Robertson EK, Kim FS, George SZ. Implications of early and guideline adherent physical therapy for low back pain on utilization and costs. <i>BMC Health Services Research</i> (2015) 15:150		

These studies corroborate the notion that treating an injury earlier versus later provides an organization savings. This is particularly true as this relates to musculoskeletal injuries and illnesses, just as it does with chronic health conditions. Outcomes demonstrate that employees are engaged and cared for in a more timely basis with an improved long-term prognosis. Beyond the savings and the timeliness of care, an Early Intervention program provides a host of intangible benefits to the organization:

- Improved convenience for employees

¹⁷ Gatchel RJ, Polatin PB, Noe C, Gardea M, Pulliam C, Thompson J. Treatment and Cost-Effectiveness of Early Intervention for Acute Low-Back Pain Patients: A One Year Prospective Study. *J Occup Rehabil.* 2003;13(1):1-9.

¹⁸ Childs JD, Fritz JM, Wu SS, Flynn TW, Wainner RS, Robertson EK, Kim FS, George SZ. Implications of early and guideline adherent physical therapy for low back pain on utilization and costs. *BMC Health Services Research* (2015) 15:150.

- Less disruption of production for the worker, co-workers, and managers
- Enhanced / timely communication
- Establishes a level of goodwill; a commitment to employees' wellbeing



CONCLUSION

A fundamentally sound Early Intervention / Employee Triage program can offer a multitude of advantages to a forward-thinking organization. First and foremost, it can reduce the depth and breadth of Worker Compensation injuries and illnesses in the workplace. This paper has presented the compliance boundaries an organization must understand and adhere to when deploying an Early Intervention program. Also, we have reviewed the literature that supports the outcomes of current programming. Key to the program is your understanding of the decision points that trigger a recordable injury.

Two final thoughts; the focus of this paper has been on the impact of an Early Intervention program as it relates to Worker Compensation, recordable injuries and their associated costs. Understand that an Early Intervention program casts a broader net than just the Work Comp system. When executed effectively it can manage non-work related aches and pains that employees come to work with, i.e., the classic “Weekend Warrior”. These potential injuries and illnesses cost organizations in other ways including absenteeism, lost productivity, and associated medical costs.

Finally, an Early Intervention program should never be deployed in a premeditated fashion to avoid all recordable injuries and illnesses. Its goals and objectives should be directed towards doing the “Right Thing” for the employee that presents with a concern. If that means referral to a physician, a recordable injury, extensive testing or perhaps even a surgery, so be it. Onsite providers must understand the important role they play, mediating the potential tension between the organizational desire to minimize recordable injuries and the needs of the individual with a potential work-related injury or illness. Self-serving considerations of the onsite provider should never be part of the decision process. Rather, the onsite provider needs to make a rational decision based on thorough history and clinical examination. If deployed with this level of transparency a balance will be struck. Employees who present with signs and symptoms of a musculoskeletal injury will receive that care they need in a timely fashion. Those who do not demonstrate signs and symptoms will be managed in a more efficacious, cost effective fashion.