

Managing Musculoskeletal Injuries with Early Intervention



Bob Patterson, MPT, MBA, CAE - EVP/Co-Founder

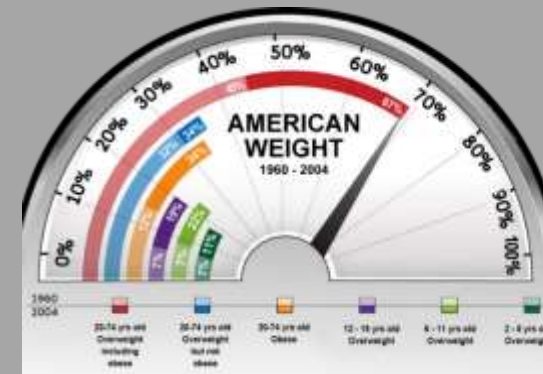
Megatrends: *We are in this together*



AGING

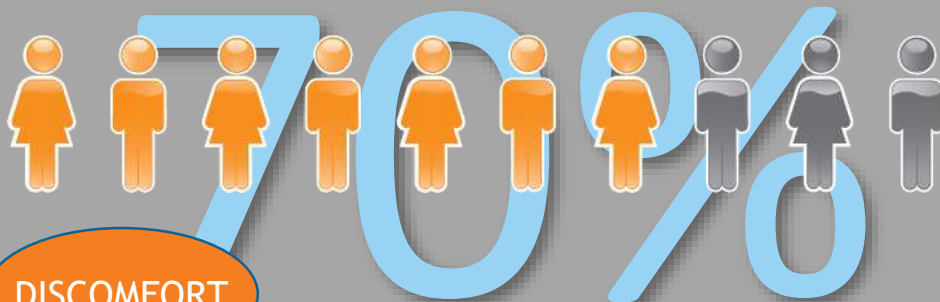
47% of Workforce
are BABY BOOMERS

OBSESITY



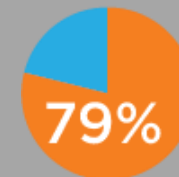
69%
of 20+
are overweight or
obese

MUSCULOSKELETAL SYMPTOMS



DISCOMFORT

INADEQUATE DAILY EXERCISE



SEDENTARY



A claw hammer with a black handle and a silver metal head lies diagonally across the upper right portion of the image. Below the hammer, in the lower left, are two silver screws. One screw is standing upright, showing its head and threads, while the other lies on its side, showing its pointed tip. The background is a wooden surface with a prominent grain pattern.

Traditional Interventions May
Miss the **MAR** ↖

What Tools Can We Use to
Identify Issues?



What is “Early Intervention?”



Know the Work



- ✗ Technical Worksite Analysis (Ergonomic, Hazard, Safety)
- ✗ Risk and Hazard Remediation
- ✗ Root Cause Analysis

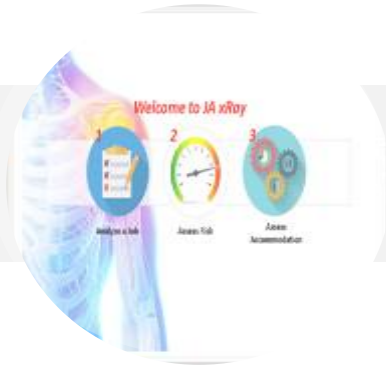


Physical - Technical Jobsite Analyses



Ergonomics

Identification, documentation and remediation of workplace hazards. Advanced Technical Consulting Available.



JHA's and JSA's

Identification and remediation of high risk job factors



Accommodations

Policy based and individualized accommodations to optimize return to work and manage disability.



Best Practices

Development, documentation and communication of task based best practices to optimize productivity and minimize risk.

What is “Early Intervention?”



Know the Work



Know the Worker



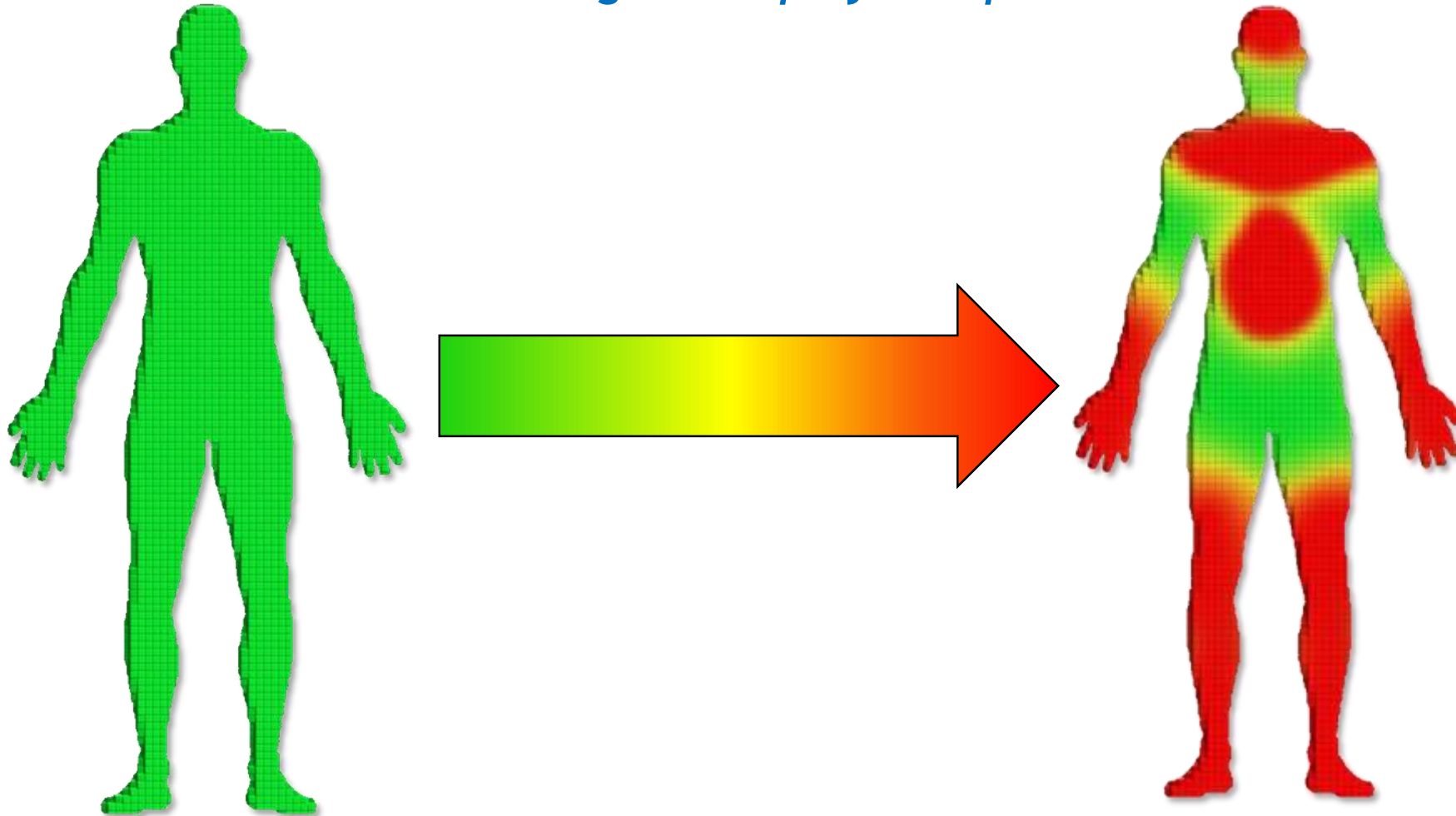
- ✗ Symptomatology
- ✗ Injury Etiology
- ✗ Relationship with Organization
- ✗ Rehabilitative Status
- ✗ Culture
- ✗ Home Life
- ✗ Personal Risk Factors



UNDERSTANDING WHEN SYMPTOMS ARE REPORTED CAN TELL YOU MORE ABOUT YOUR SUCCESS WITH A CASE THAN HOW SYMPTOMS OCCUR

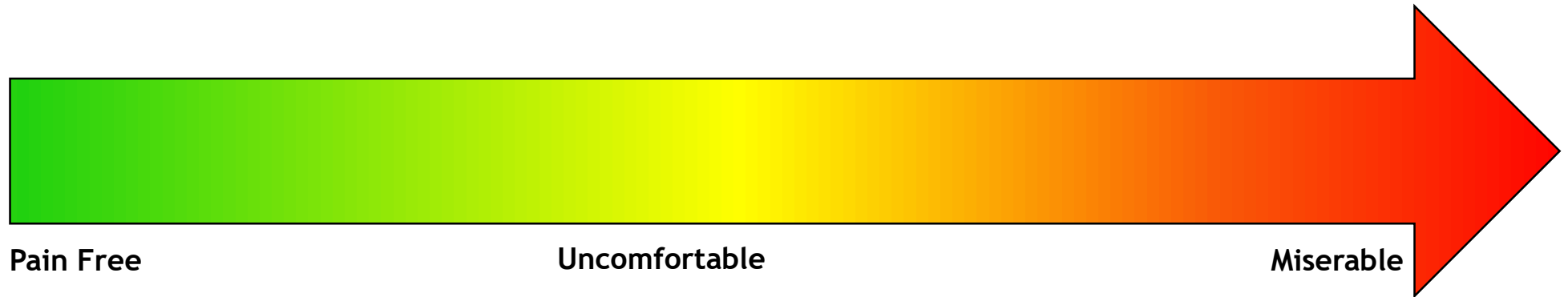


Understanding the Employee Experience

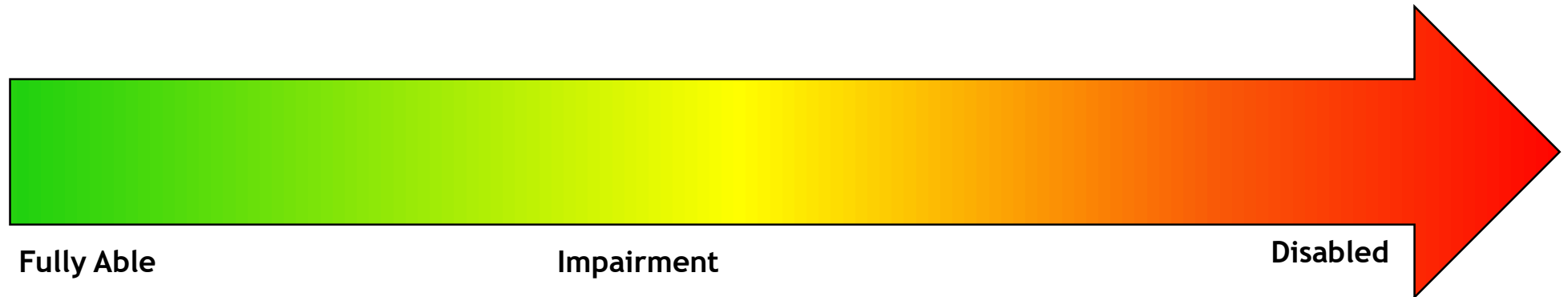




The Pain Scale



The Function Scale





Employee A



In Common:

- Age
- Job/PD's
- Culture and Background
- Body Composition
- Work Habits

Not In Common:

- Supervisor
- Injury Reporting Expectations
- Home and Family Obligations
 - Media Exposure
 - Resilience

Employee B

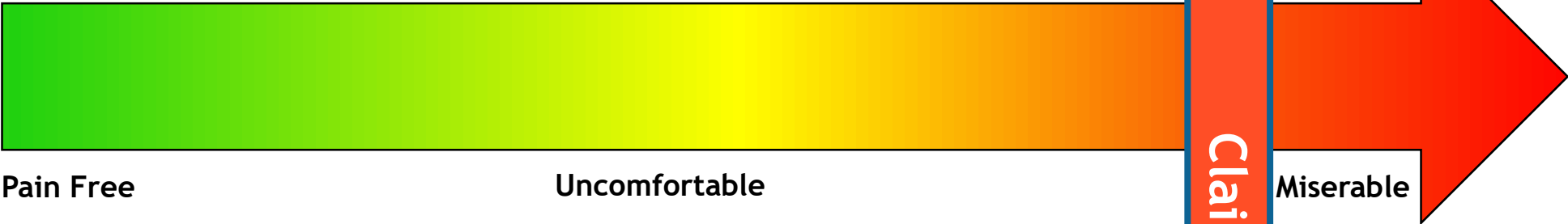




- Supervisor
 - Injury Reporting Expectations
 - Home and Family Obligations
 - Media Exposure
 - Resilience
- Supportive
 - Not Stated
 - Fearful of Income Loss
 - No Secondary Gains
 - Can Tolerate a LOT



The Pain Scale



The Function Scale



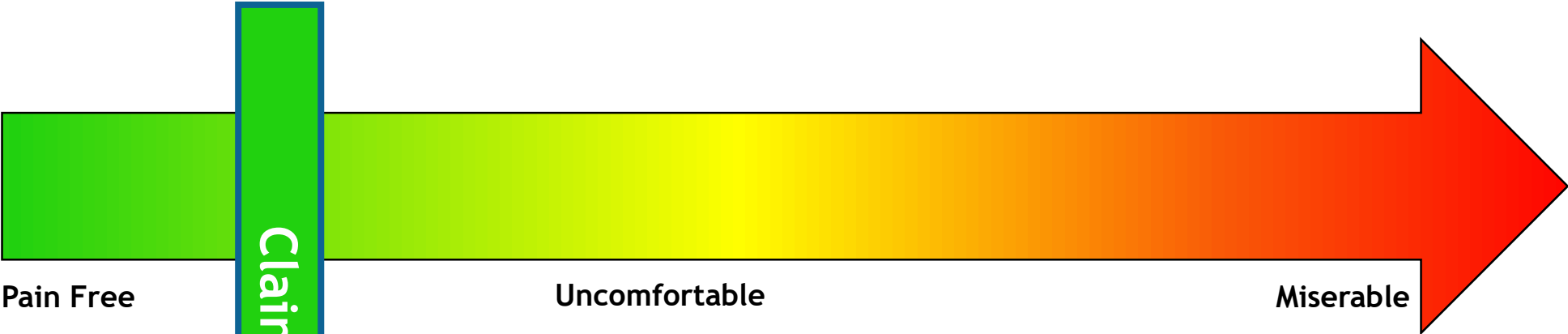


- Supervisor
- Injury Reporting Expectations
- Home and Family Obligations
- Media Exposure
- Resilience

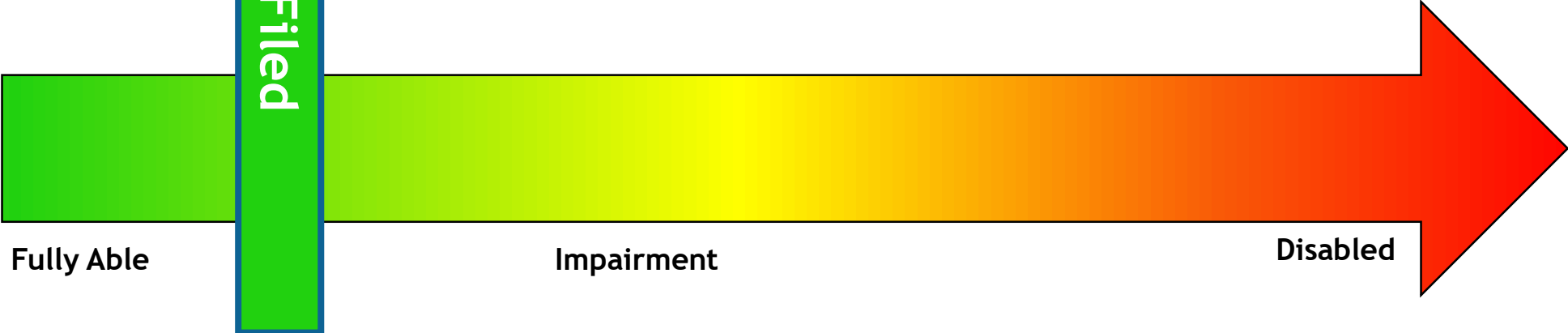
- Venomous - Not Liked
- Report Early
- Knows his settlement will cover it
- Secondary Gains Motivate
- Cannot Tolerate a LOT



The Pain Scale

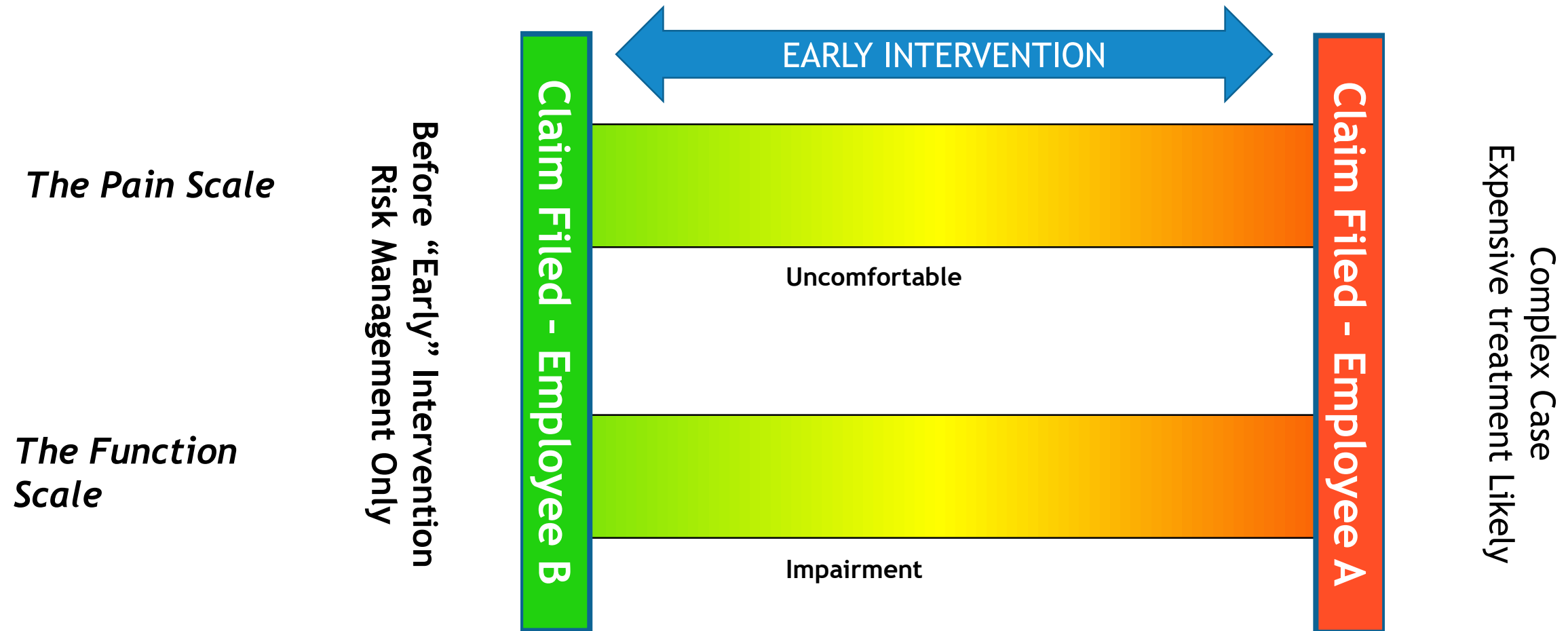


The Function Scale





Why the Difference?



What is “Early Intervention?”



Know the Work

Know the Worker



HOW DO YOU GET TO KNOW THE WORKER?

- ✗ Symptomatology
- ✗ Injury Etiology
- ✗ Relationship with Organization
- ✗ Rehabilitative Status
- ✗ Culture
- ✗ Home Life
- ✗ Personal Risk Factors

EE Interview
EE and Sup. Interview, Incident Report
EE and Sup. Interview - HR Records
EE Interview, MD/PT Outreach
Observation
EE Interview, HR Outreach
EE Interview



What is “Early Intervention?”



Know the Work



Know the Worker



Know the System



- ✗ Workers' Compensation
- ✗ Healthcare
- ✗ Disability



Systemic Issues that Drive Cost



The Workers' Compensation System



THE NASH EQUILIBRIUM – Game Theory in Comp



$$b(\sigma) = b_1(\sigma_{-1}) \times b_2(\sigma_{-2}) \times \cdots \times b_n(\sigma_{-n}).$$

THE NASH EQUILIBRIUM - DECAYED



WHO'S AT THE TABLE?



- ✖ Claimant
 - ✖ Employer
 - ✖ Physician
 - ✖ Adjustor/Analyst
 - ✖ RTW Coordinator
 - ✖ Attorney
 - ✖ WC Medical Director
 - ✖ WC Supervisor/Manager
 - ✖ WC Senior Executive
-
- ✖ And of Course last, but definitely not least....



ARE YOU A STAKEHOLDER?



Safety

Should be leading the RTW/SAW throughout the Injury Life Cycle

REGARDLESS of when claim occurs

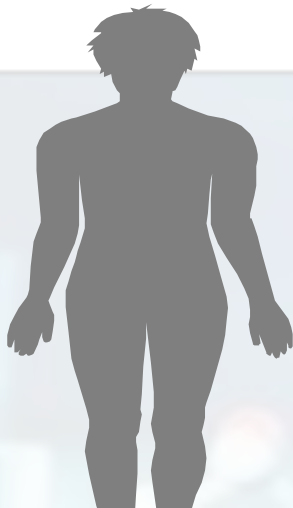
What is “Early Intervention?”

A science concerned with three domains.

PHYSICAL

Anatomy,
Anthropometry,
Physiology, Biomechanics

**e.g. FORM, FUNCTION,
FIT, COMFORT, DISEASE,
INJURY**



ORGANIZATIONAL

Psychology, Sociology
Process Engineering

**e.g. CULTURE, TEAM
WORK, INNOVATION,
PRODUCTIVITY**



COGNITIVE

Perception,
Concentration, Memory,
Reasoning

**e.g. LEARNING,
PERFORMANCE, STRESS,
PREFERENCE,
BEHAVIOR, MOTIVATION**



Early Intervention for the Safety Professional In a Nutshell



EARLY INTERVENTION

- **Interview** (as per earlier)
- **Ergonomics** — Engineering, Admin, Work Practice, PPE
- **Job Coaching** (not training)
- **Stretching and Exercise** (When in doubt, call in a PT or ATC, but beware. Keep us focused 😊)
- **Psychosocial Inventory**
- **Wellness Integration**
- **Accommodations Specialist**



Early Intervention Works

**Wa State Dept of Labor & Industries and HFES –
250 case studies**

- **68% reduction in WC rates**
- **75% reduction LTD's**
- **39% reduction in cost per claim**
- **58% reduction in absenteeism**
- **ROI – 1:45.5**



Early Intervention Works

Anema JR, Steenstra IA, Bongers PM, de Vet HC, Knol DL, Loisel P, van Mechelen W. Multidisciplinary rehabilitation for subacute low back pain: graded activity or workplace intervention or both? A randomized controlled trial. *Spine*. 2007 Feb 1;32(3):291-8; discussion 299-300.

METHODS: Participants sick-listed 2 to 6 weeks due to nonspecific LBP were randomized to workplace intervention (n = 96) or usual care (n = 100).

CONCLUSION: Workplace intervention is advised for multidisciplinary rehabilitation of subacute LBP.



Early Intervention Works

“Failure to implement work site accommodations for work-related upper extremity disorders (WRUEDs) may be a factor contributing to delayed functional recovery and relapse.”

2001: Shaw W S; Feuerstein M; Miller V I; Lincoln A E; Clinical tools to facilitate workplace accommodation after treatment for an upper extremity disorder. Assistive technology : the official journal of RESNA 2001;13(2):94-105.



Early Intervention Works

In the years prior to the introduction of Briotix support, Client MSD's were substantially higher than in the year subsequent. A 65% reduction in total cost of ergo claims was realized within the first full year of the Briotix Ergonomics Program.

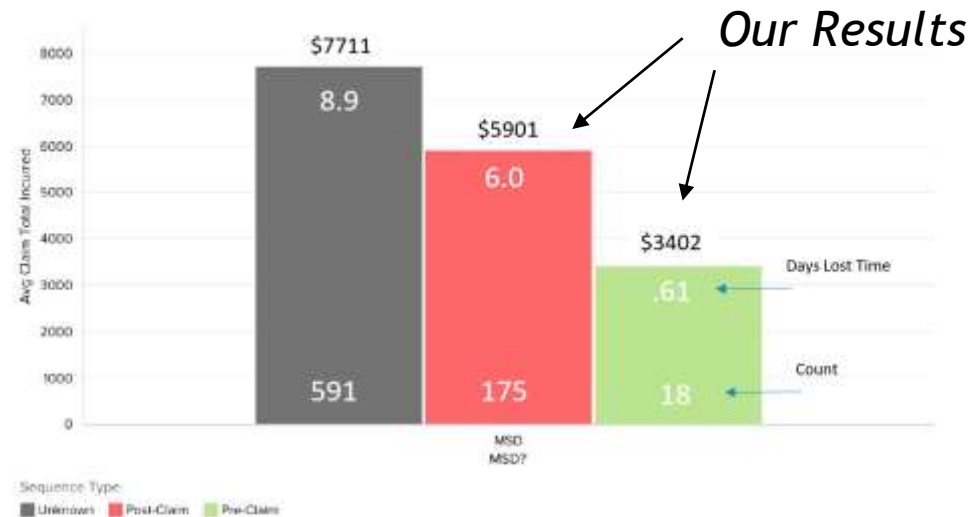




Early Intervention Works

Efficacy

Further, in another controlled, same-job / same-location study analyzing our outcomes for claimants receiving post-claim intervention... our post-claim interventions were significantly better than the control population receiving no ergonomic intervention.



Post-care intervention results in material improvement in claim outcomes... even factoring for significant expense associated with chronicity.

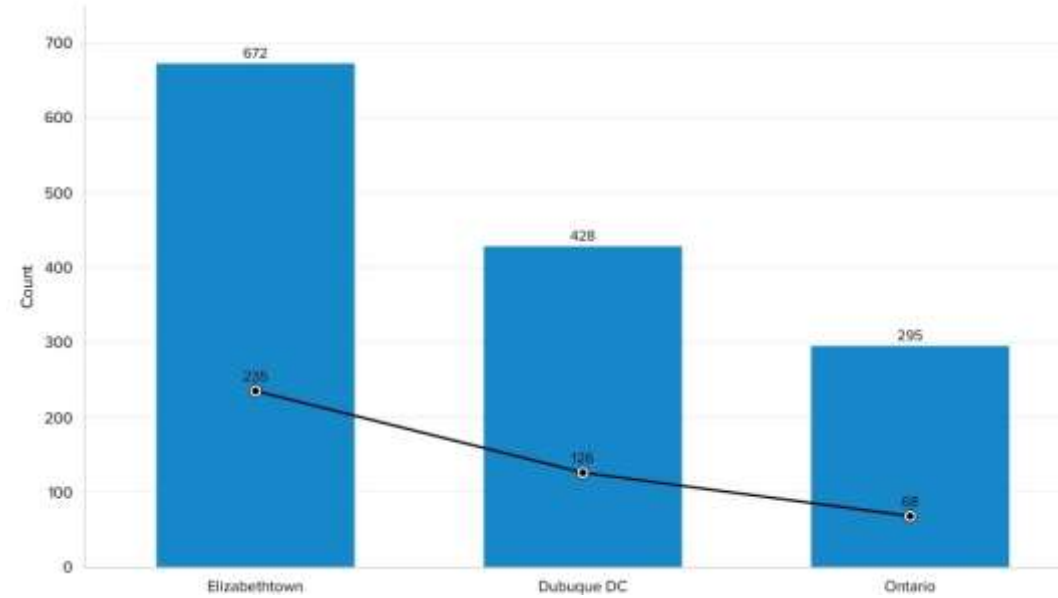
\$455,548

Projected Savings



ESI INCIDENCE RATE STATISTICS

Distribution of ESI Interactions



Of those employees receiving ESI support, how many subsequently filed a claim?

18 employees filed a claim post ESI intervention.

95%
Resolution Rate

120 Claims Avoided
at an average cost of \$15,456

\$1.85M
Projected Savings

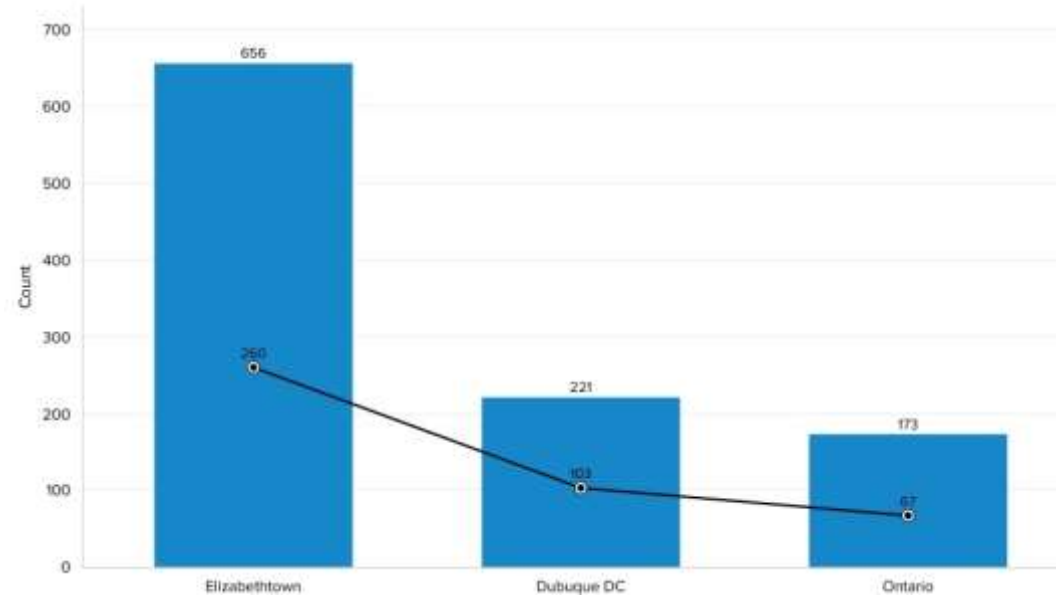
Footnotes:

1. Claims avoided are calculated as (employees serviced - claimants among them) x 35%.
2. Projected savings are calculated as claims avoided x average cost of claim for a claimant receiving no services.



CHRONIC CONDITION INCIDENCE RATE STATISTICS

Distribution of CC Interactions



Of those employees receiving CC support, how many subsequently filed a claim?

2 employees filed a claim post CC intervention.

99%
Resolution Rate

72 Claims Avoided
at an average cost of \$15,456

\$1.1MM
Projected Savings

Footnotes:

1. Claims avoided are calculated as (employees serviced - claimants among them) x 20%.
2. Projected savings are calculated as claims avoided x average cost of claim for a claimant receiving no services.



BRIOTIX

LET'S BUILD A BETTER WORKPLACE.

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Success Stories

HOSPITALITY



STATE & LOCAL



ENERGY



FOOD & BEVERAGE



HEALTH



TECHNOLOGY



OTHER



Metrics Driven Program Elements
- Organizational



Coaching for Culture
- Organizational



Teaching for Behavioral Change
- Cognitive



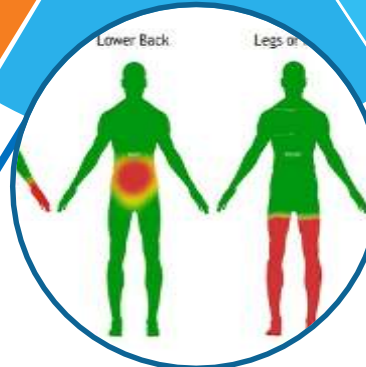
Functional and Physical Testing
- Physical



Technical Job Site Analyses
- Physical



Early Symptom Intervention
- Cognitive



WHY BRIOTIX?

We are a new class of partner committed to transforming organizations by unlocking human potential.



**Small Company with a
LARGE Footprint.**



**Passionate, caring, and
credentialed experts.**

**Scalable.
The scale you need.
1 to 100,000+.
We've got you covered.**



**Incredible RESULTS coupled
with incomparable DATA and
DATA SCIENCE you need.**

