

October 11, 2018

Leveraging the New Neuroscience of Pain for Injured Workers

BreakThrough
PHYSICAL THERAPY



Jeff Hathaway

Jeff Hathaway, PT, DPT, is the founder and CEO of BreakThrough Physical Therapy which has 16 locations in NC/SC. Dr. Hathaway's has extensive training in business development, conflict management, and has had a focus in workers' compensation/industrial consulting. He is a recognized national speaker and an author on business and physical therapy related topics. He has been a Physical Therapist for 34 years, a certified business coach, and is dedicated to being a primary player in the healthcare continuum and moving healthcare toward more value-based and affordable care.

BreakThrough
PHYSICAL THERAPY



Low Back Pain

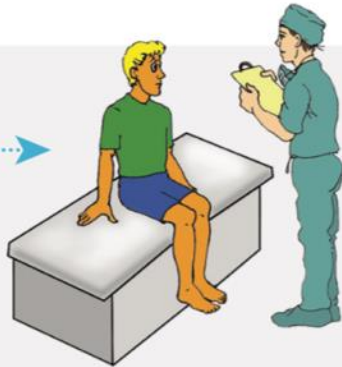
Pre-operative Education Pathways



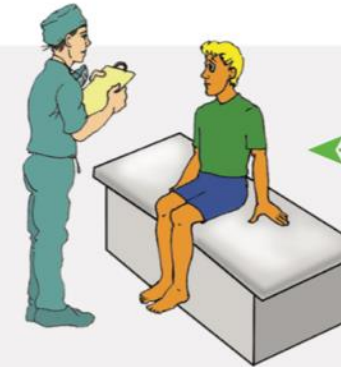
OLD
APPROACH

Patient has low-back and leg pain.
Non-responsive to therapy, injections or medicine.

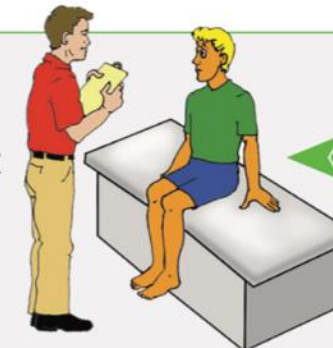
NEW
APPROACH

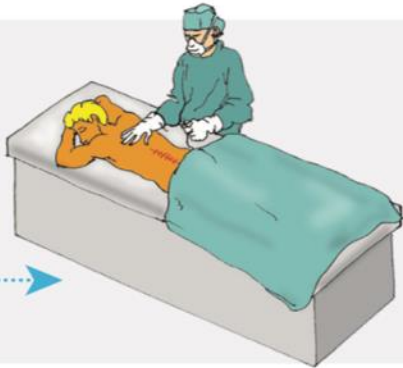


Patient consults with spine surgeon;
decides to undergo low-back surgery.
Surgeon gives patient 10-15 minutes of
**preoperative education regarding the
surgery, hospital procedures and recovery.**

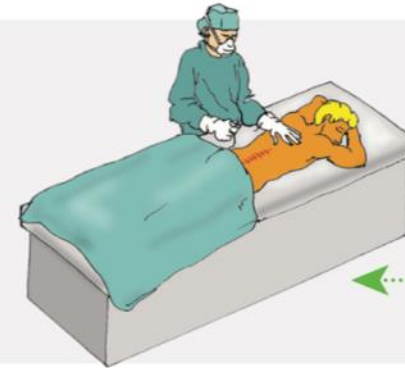


Patient is also sent to a
physical therapist for a
one-time visit. PT gives patient
25 minutes of **preoperative
education regarding pain
science** and a booklet
he/she can take home.

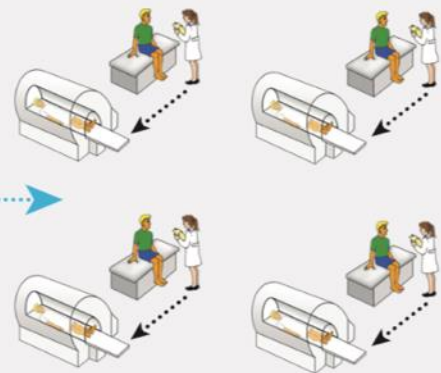




Patient undergoes low-back surgery.

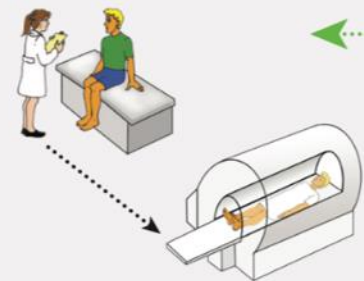


Patient is tracked for one year after surgery



Patient doesn't understand how pain works and worries about post-operative pain. Patient undergoes additional imaging, tests and treatments, beyond standard follow-up procedures.

Patient understands what pain is and how it works, and has realistic expectations for post-surgical pain. Patient undergoes standard follow-up imaging, tests and treatments.



After one year, both patients have the same outcome regarding back pain, leg pain, fear of work, fear of physical activity, pain catastrophization and function. Substantial differences are observed in average cost and level of satisfaction.

AVG. COST FOR IMAGING,
TESTS AND TREATMENTS:

\$4,833

Patient is
significantly less satisfied
with surgery.

AVG. COST FOR IMAGING,
TESTS AND TREATMENTS:

\$2,678

(45% cost savings)

Patient is
significantly more satisfied
with surgery.

||

What are we going to cover today?

How Neuroscience of Pain can be leveraged to prevent the injury and mitigate costs once an injury has occurred.

- **John – covers the prevention side**
- **Jeff – covers the post injury side**



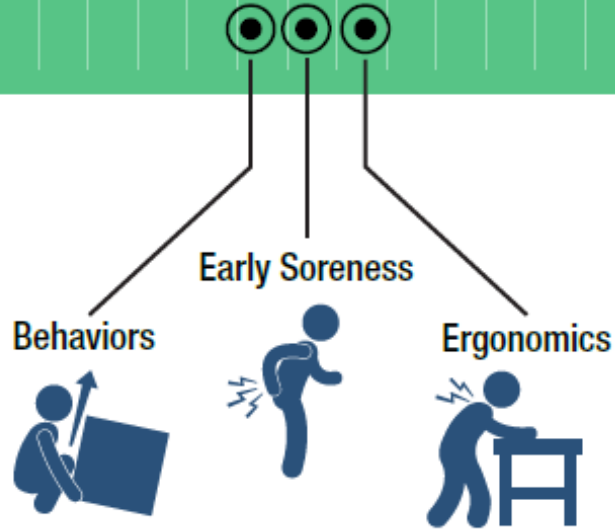
John Groves

John Groves, PT, DPT, is the CEO of Fit For Work, the nation's leader in onsite injury prevention and pre-employment testing. Fit For Work provides companies with preventative solutions in over 600 locations across North America, addressing the incidence and costs associated with musculoskeletal sprains and strains. Leveraging their national presence in combination with local roots, they provide all of their clients with the highest level of customer service while bringing an essential level of sophistication, corporate support, and resources to the table.





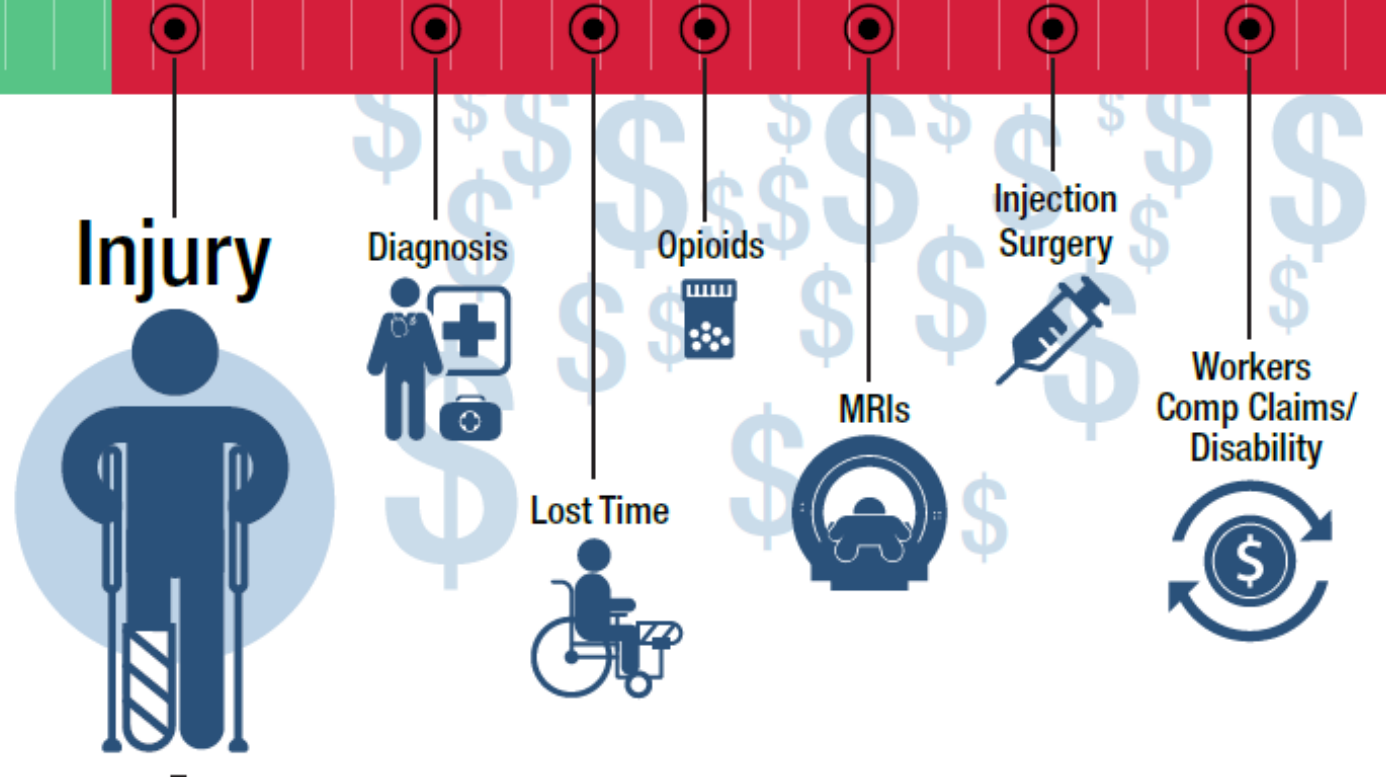
PRE-INJURY



Prevention happens by paying attention to **THREE LEADING INDICATORS** to ensure the injury or accident never occurs in the first place.

**50% Reduction
in Costs**

POST-INJURY





What is pain?

Pain is simply an output of the brain. It's influenced by many things, including:

- Expectations
- Past Experiences
- Culture
- Stress/Fear in unrelated areas
- Stress/Fear of the pain itself







Demolition Derby Study

- 01** 40 Drivers
- 02** Average of 1,500 Accidents Each
- 03** Only 1 Driver with Chronic Neck Pain





What's Different?

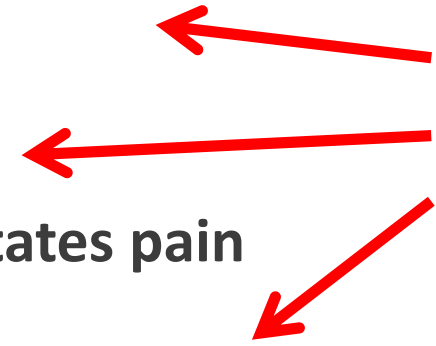
- Context
- Motivation
- Perception

Takeaway: What we Know About Pain



1. Pain is VERY complex
2. All pain is REAL
3. Everybody's pain is different
4. The word PAIN
5. Tissues Heal
6. Fear
7. Environment dictates pain
8. Pain is normal

You can
influence
these!



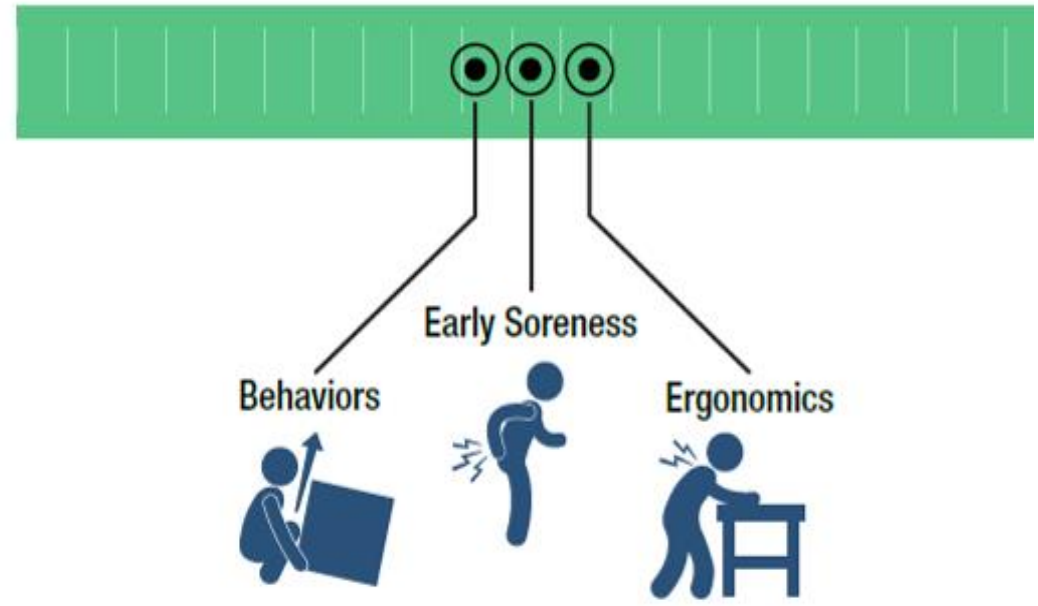
The Opportunity with Industrial Workers

- Opportunities to engage before there is a formal injury
- Opportunities to chaperone down the correct path
- Amount of time spent at work





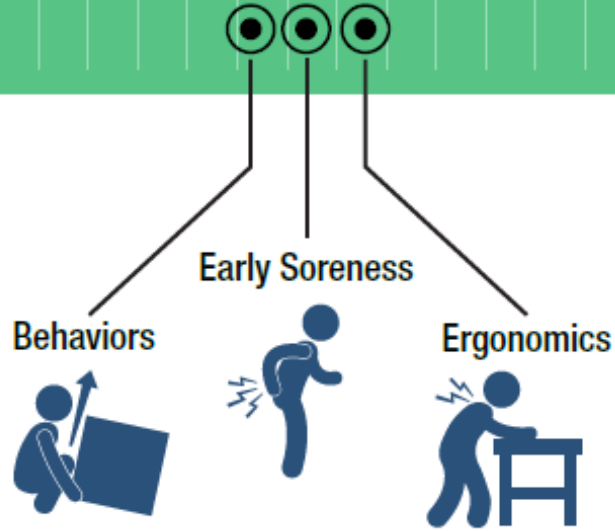
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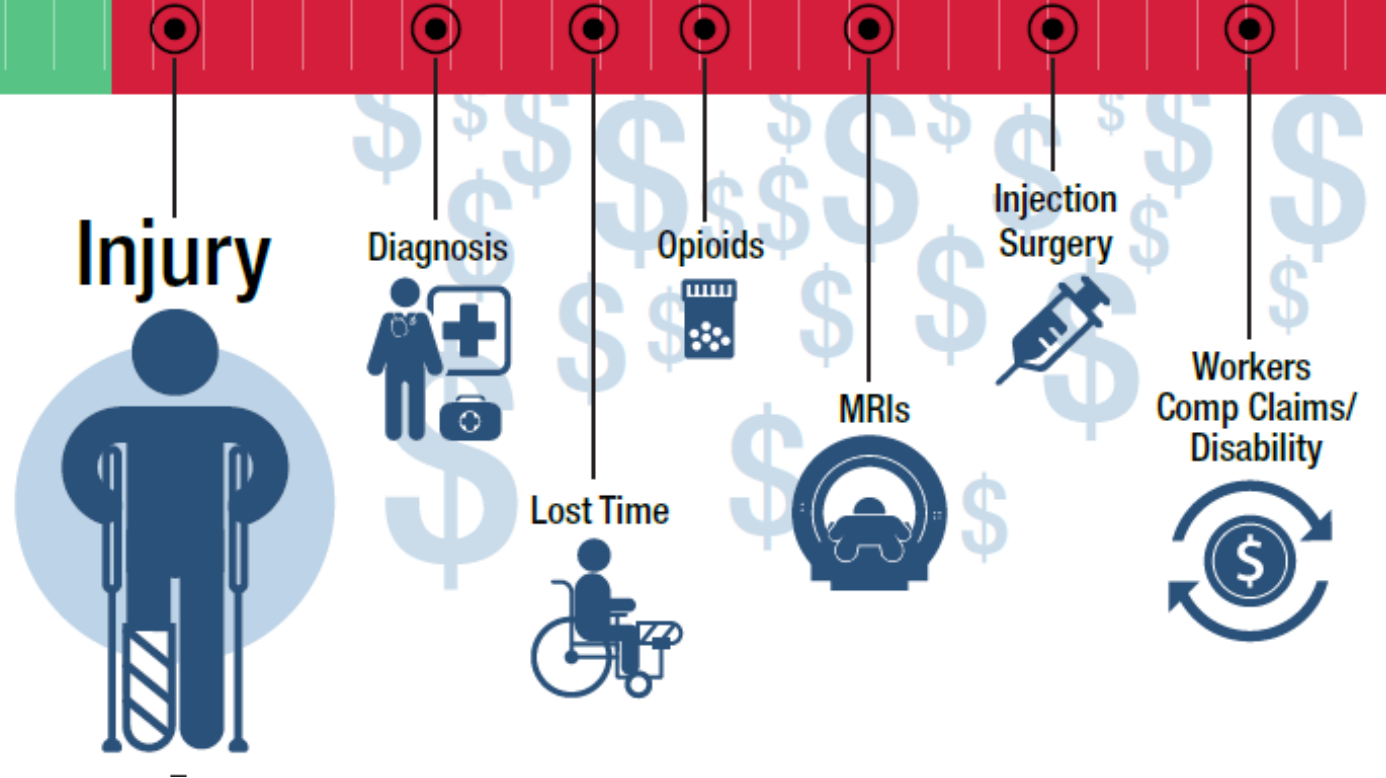


PRE-INJURY



Prevention happens by paying attention to **THREE LEADING INDICATORS** to ensure the injury or accident never occurs in the first place.

POST-INJURY



**50% Reduction
in Costs**

Pathways

OLD APPROACH

Average cost \$2,100-\$2,200

The initial meeting might not happen for up to a month after onset of pain and then there is no set procedure for treatment.



NEW APPROACH

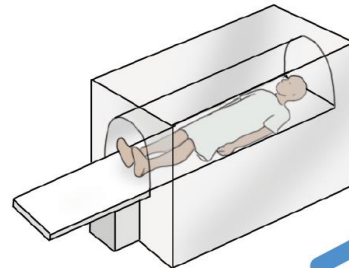
Average cost \$900-\$1,000

Immediately see Physical Therapist to Initiate evidence-based conservative program



Physical Therapy

Patients with complicated back pain are sent for additional treatment

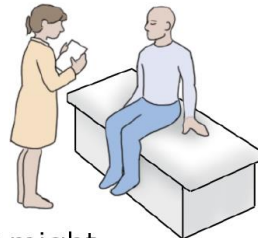


Patient might undergo diagnostics, such as MRI

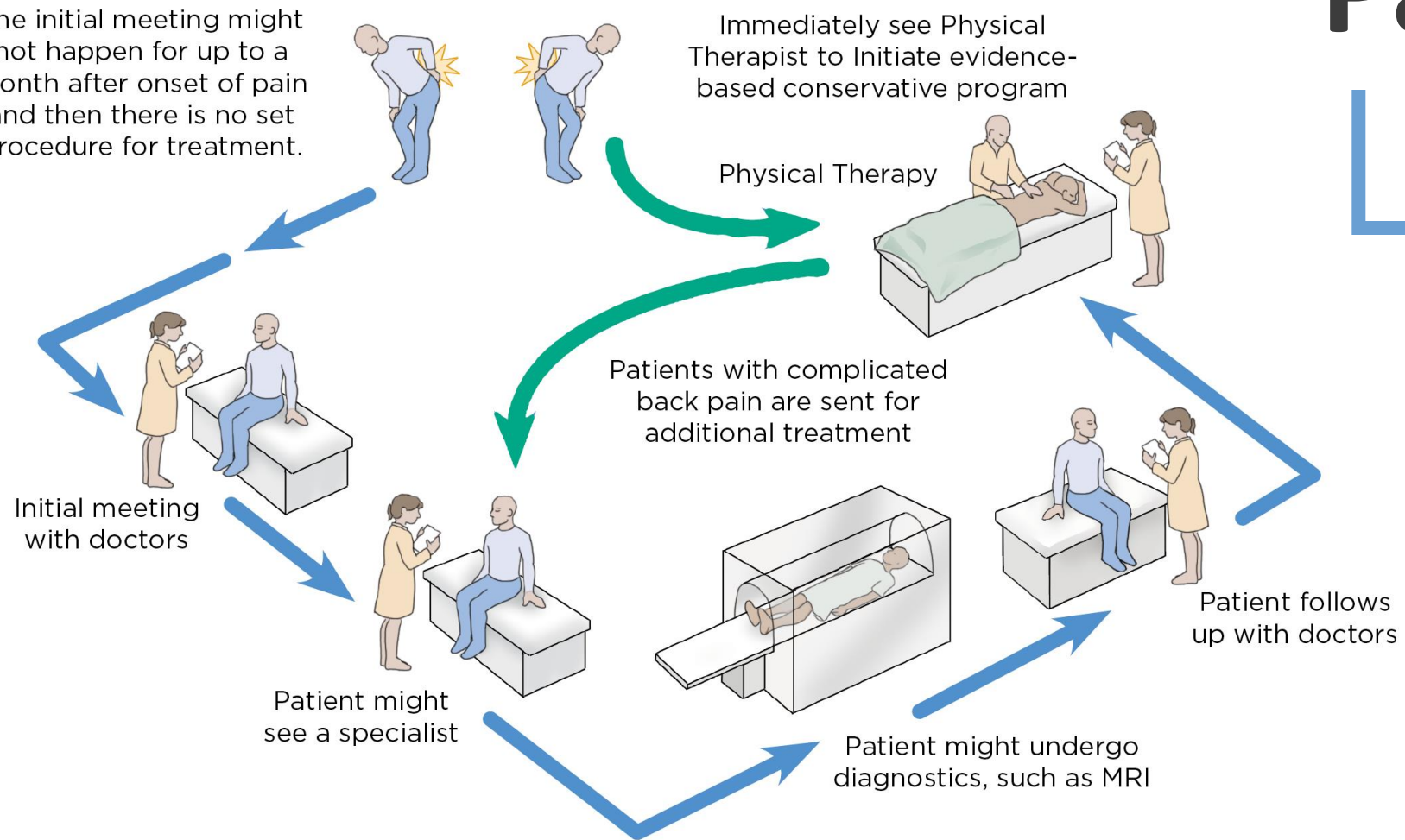
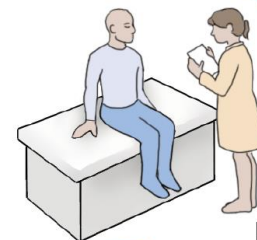
Initial meeting with doctors



Patient might see a specialist



Patient follows up with doctors



Research On Right Provider, Right Time, Right Care

Right Provider

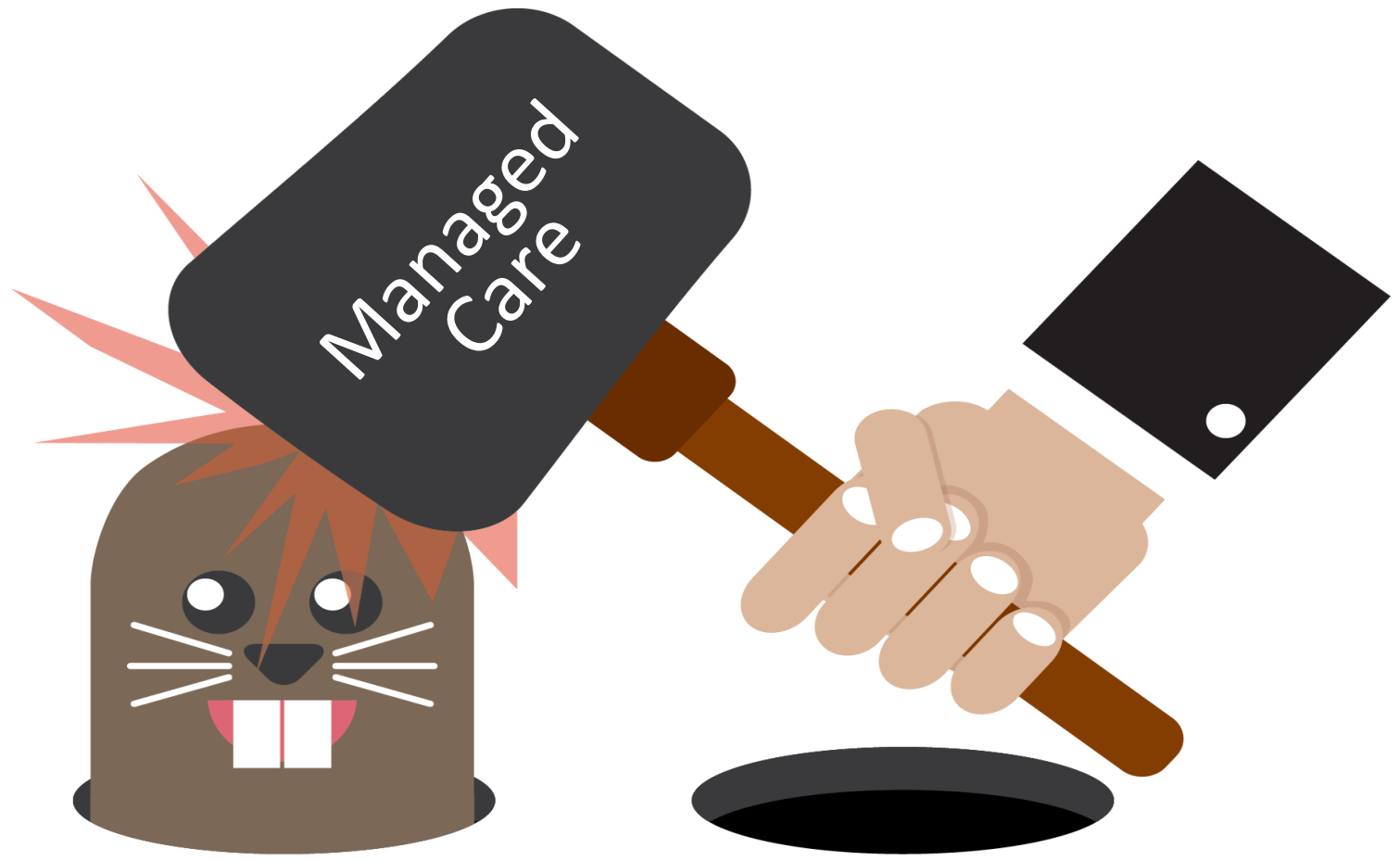
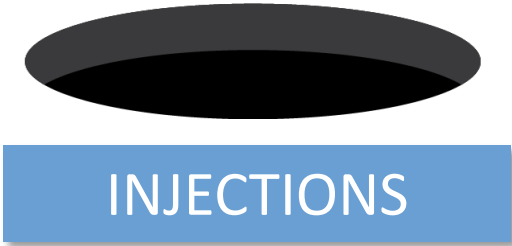
Several studies showed significant reduction in costs if **PT is seen within 14 days of injury**

Right Time

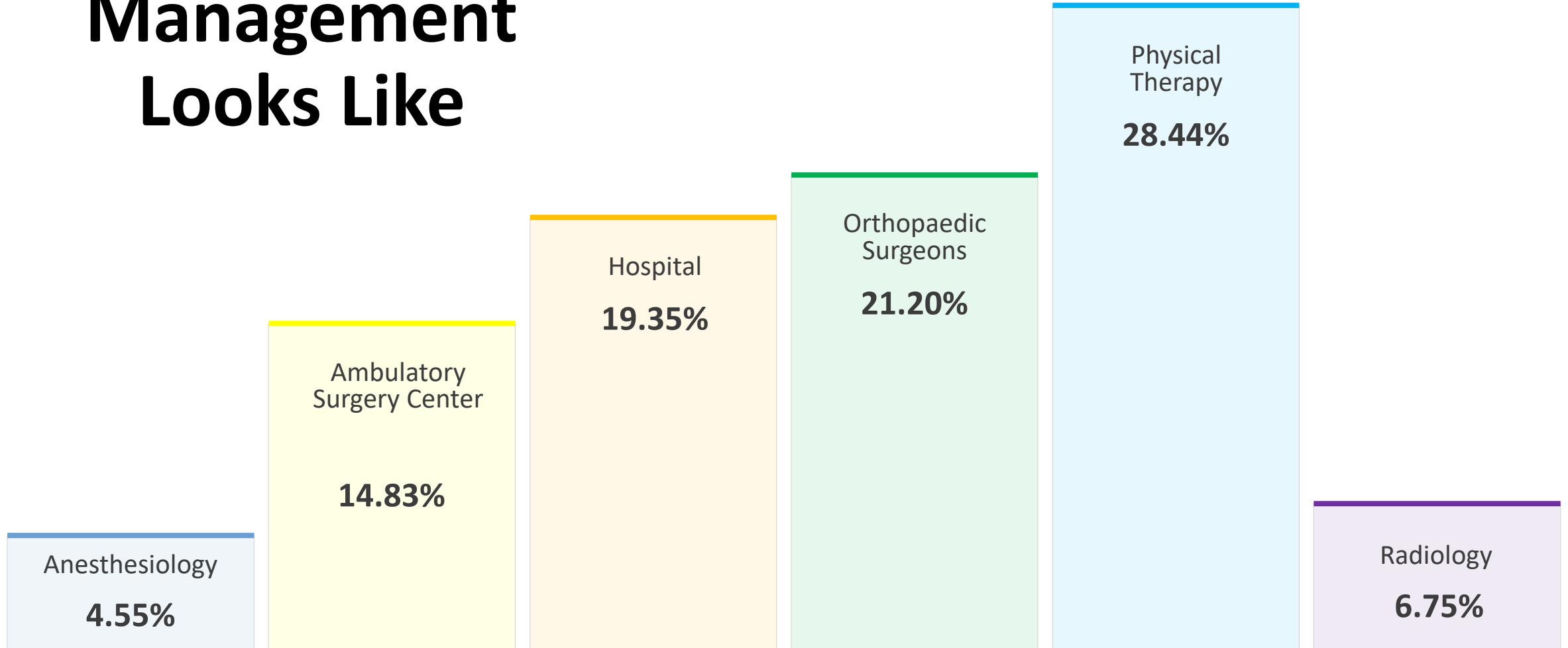
If PT is seen within 14 days of injury, **54% to 59% reduction in total cost of care**

Right Care

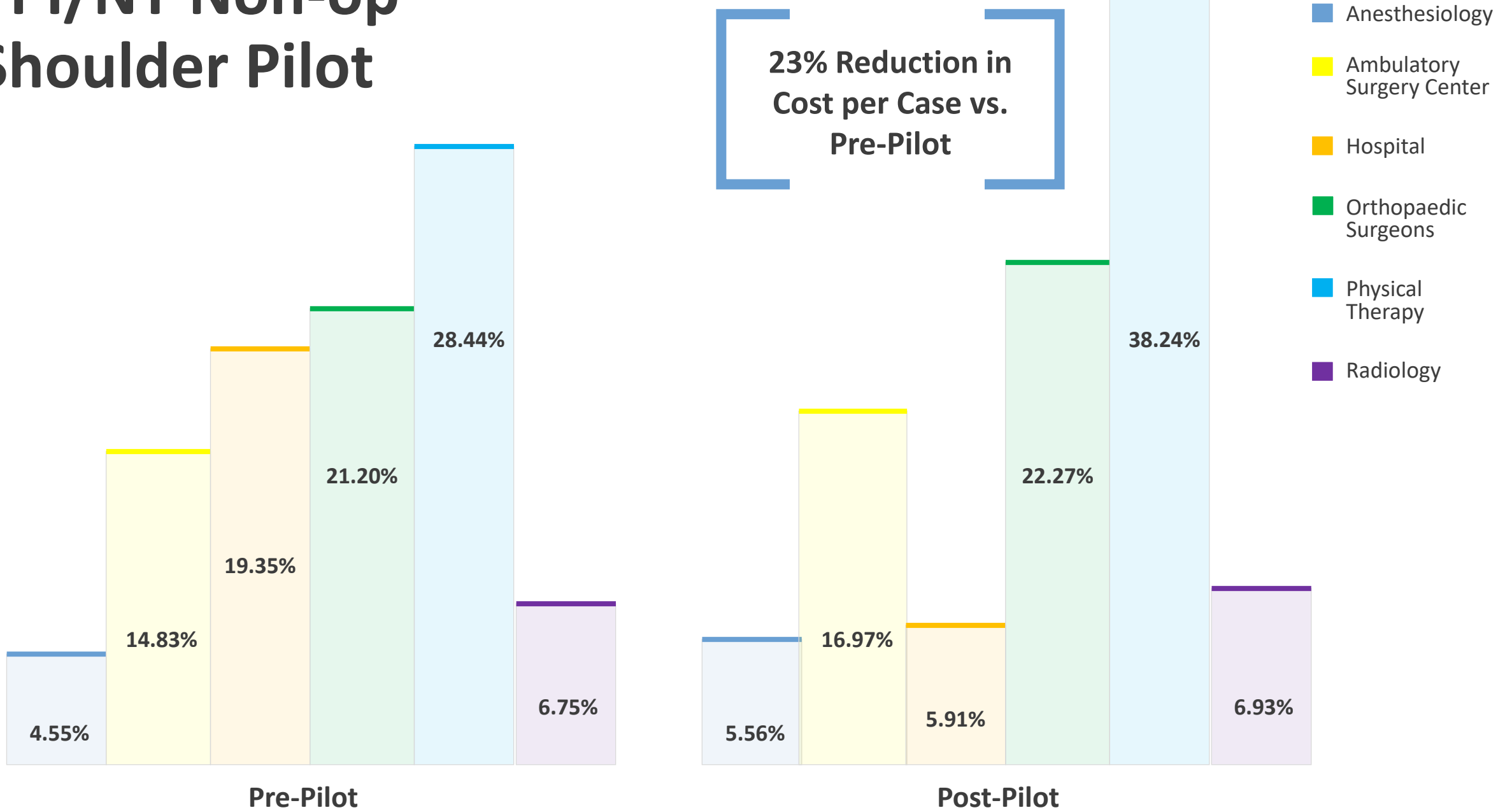
Only **25%-33% of care is evidence based**, but, EBP patients averaged **6 visits vs. 15 visits** and **total cost was reduced 17% - 19%**



What MSK Silo Management Looks Like



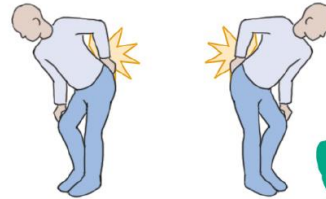
TPI/NY Non-op Shoulder Pilot



Wrong Clinical Pathway Cheaper

OLD APPROACH Average cost \$2,100-\$2,200

The initial meeting might not happen for up to a month after onset of pain and then there is no set procedure for treatment.



NEW APPROACH Average cost \$900-\$1,000

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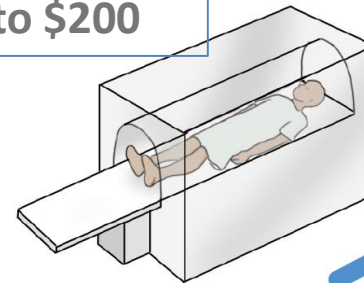
\$120 to \$60

Physical Therapy



Patients with complicated back pain are sent for additional treatment

\$250 to \$200



Patient follows up with doctors

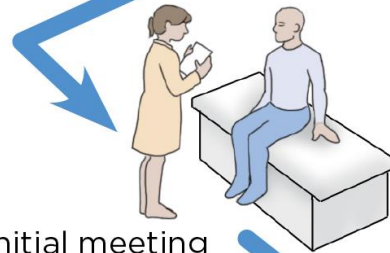
\$1000 to \$500

Patient might undergo diagnostics, such as MRI

Patient might see a specialist

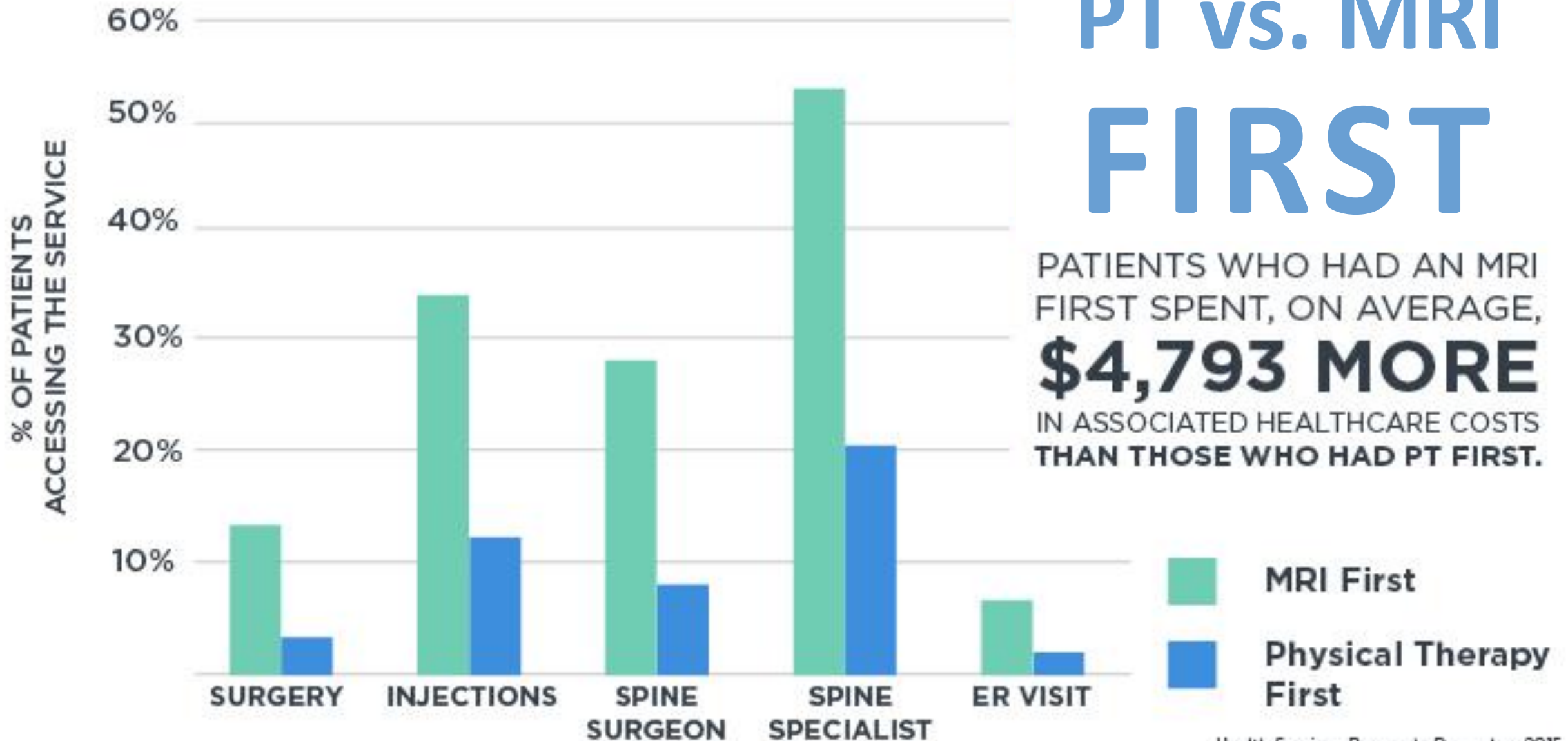
Initial meeting with doctors

\$150 to \$100



PT vs. MRI FIRST

PATIENTS WHO HAD AN MRI
FIRST SPENT, ON AVERAGE,
\$4,793 MORE
IN ASSOCIATED HEALTHCARE COSTS
THAN THOSE WHO HAD PT FIRST.



No MRI vs.
Timely vs. Early

Costs of WC
cases
(3,000+ injured
workers)

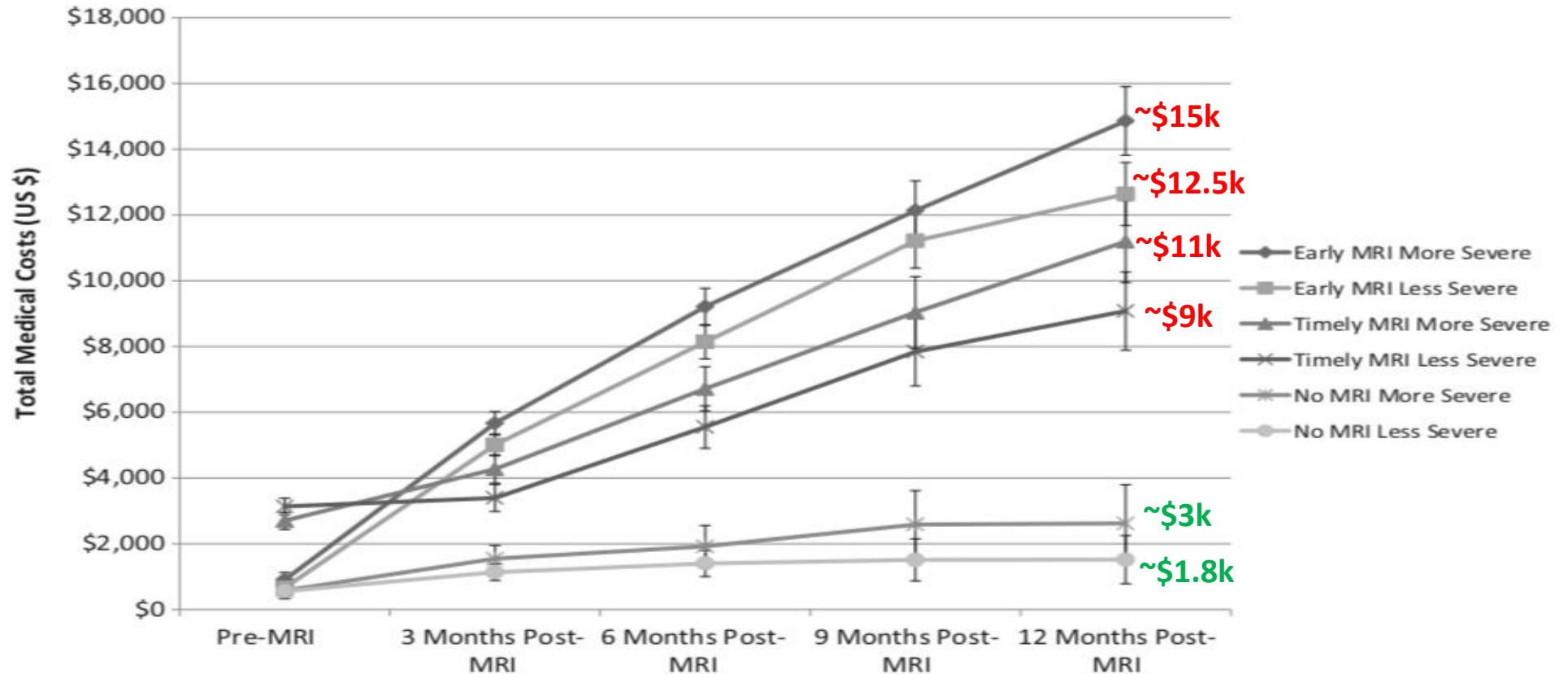


Figure 1. Total medical costs over time by MRI diagnostic group. MRI indicates magnetic resonance imaging.

1211 people w/o symptoms

20's: 75% disk bulge
Total: 87.6% disk bulge

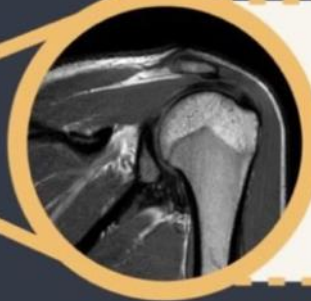
Nakashima, H. et al. Spine (Phila Pa 1976), 2015.



53 people w/o symptoms
(age 45-60)

72% SLAP injury

Schwartzberg, R. et al. Orthop J Sports Med, 2016.



3110 people w/o symptoms

At 50 y/o:
80% disk degeneration
36% disk protrusion

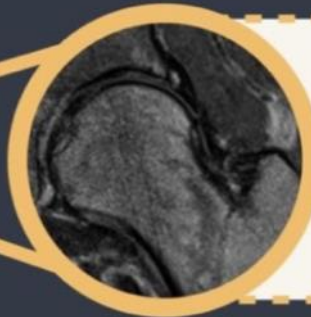
Brinjikij, W. et al. AJNR Am J Neuroradiol, 2014.



45 people w/o symptoms
(age 15-66)

69% signs of labral tear

Register, B. et al. Am J Sports Med, 2012.



44 people w/o symptoms
(age 20-68)

43 had at least one
meniscal abnormality

Beattie, K.A. et al. Osteoarthritis Cartilage, 2005.



ABNORMAL OR JUST A PART OF LIFE?
ASYMPTOMATIC FINDINGS.





MRI Summary

When it comes to medical imaging and scans:

Do Not B.A.R.F.:

Brainless Application of Radiological Findings

or Create V.O.M.I.T.:

Victims Of Modern Imaging Technology...

by Richard Heyward (Neurosurgeon) in his editorial on the issues of imaging in the BMJ back in 2003.

Never treat the scan, always treat the human!

"The vast majority of injured workers should see the properly qualified physical therapist first, this is critical to avoiding opioids, unnecessary testing and procedures. This would also drive the right patients to the appropriate specialists in a timely manner yielding much better results."

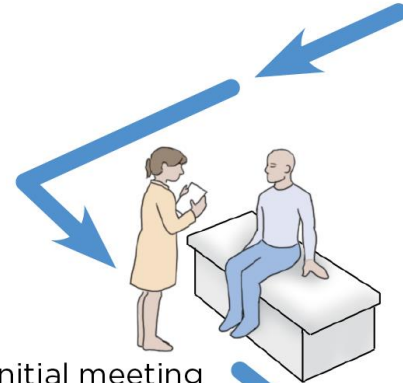
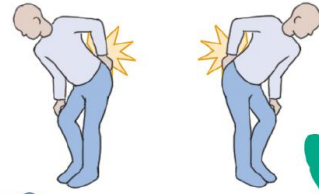
*Dr. Anand Joshi
Duke Orthopedic Surgery
Assistant Professor*

Wrong Clinical Pathway Predictable/ Known Costs

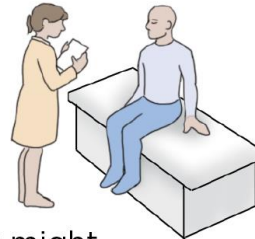
Case/Bundle
\$800 Plus
% Savings

OLD APPROACH Average cost \$2,100-\$2,200

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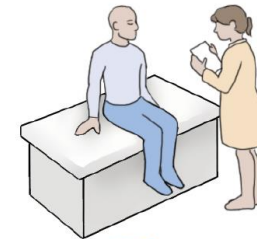
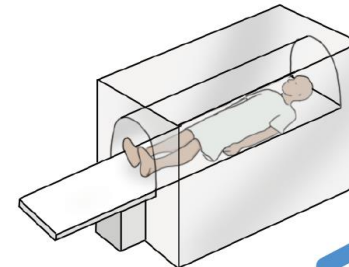
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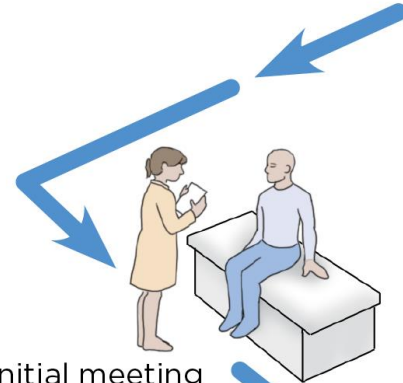
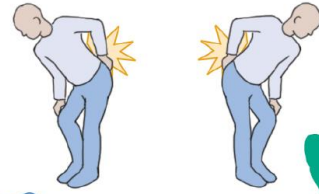
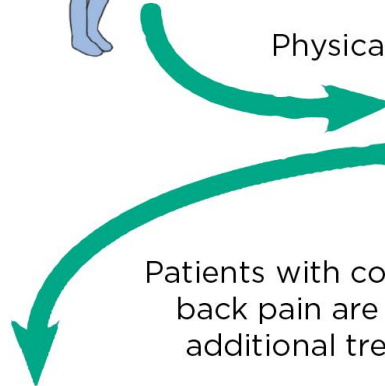
NEW APPROACH Average cost \$900-\$1,000

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Physical Therapy

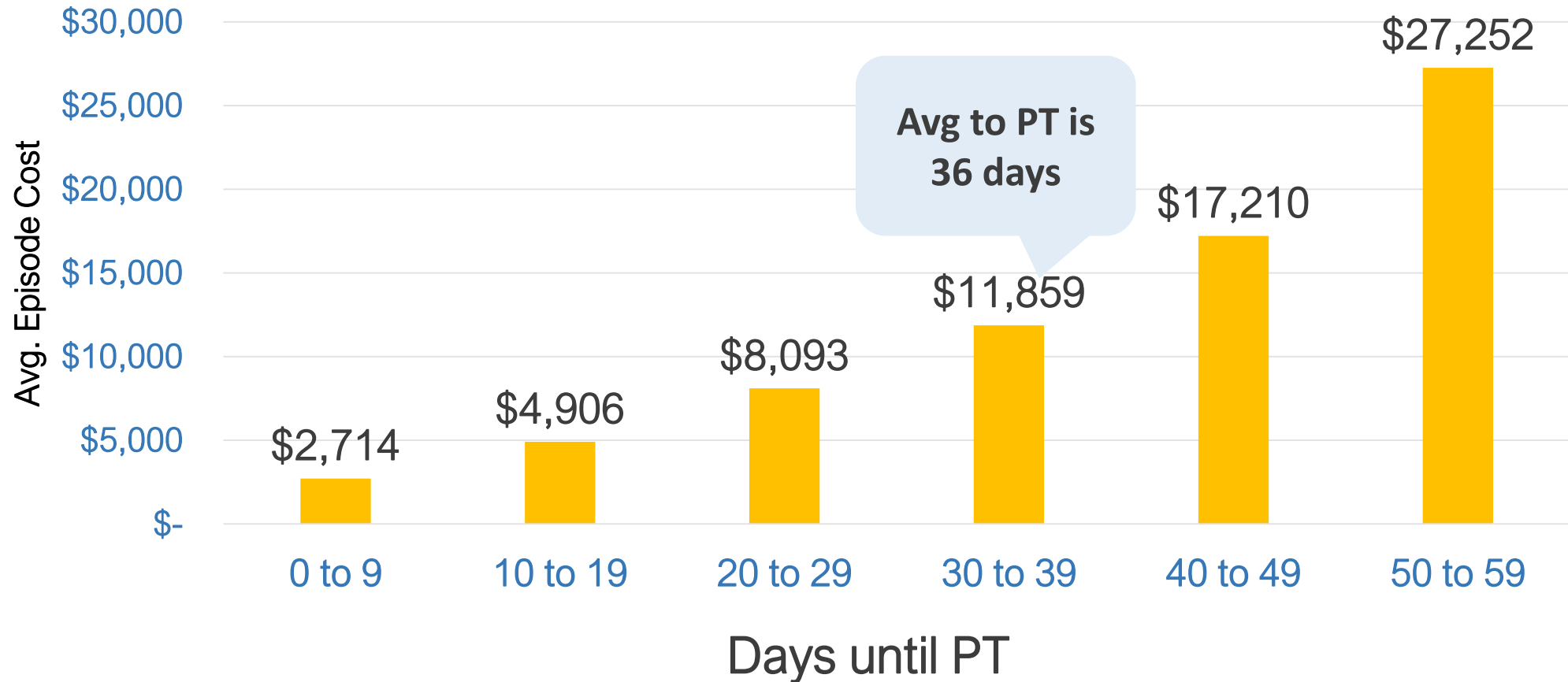


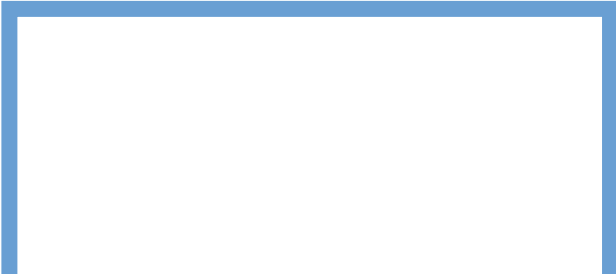
Patients with complicated back pain are sent for additional treatment




WC Specific Data

Avg. Episode Cost Relative to Start of PT (Outliers *Within* Grouped Data Excluded)





Burden of Raleigh/Durham Area Spine Care



- Data suggests a need of 1.17 spine surgeons per 100,000 population
- Based on population, one would expect a need of 21 spine surgeons
- The area has, at last count, 61 spine surgeons!

“The care of back pain today is markedly supply-sensitive: more providers - more procedures. We need to build a population health system where healthcare resources are utilized in a rational way.

Programs such as Stop Injury Now save sick leave days, reduces opioid consumption and favors conservative care, providing the right triggers for more resource-intensive medicine. We need to think as an army to serve in best interest of our patients in an organized and rational campaign.”

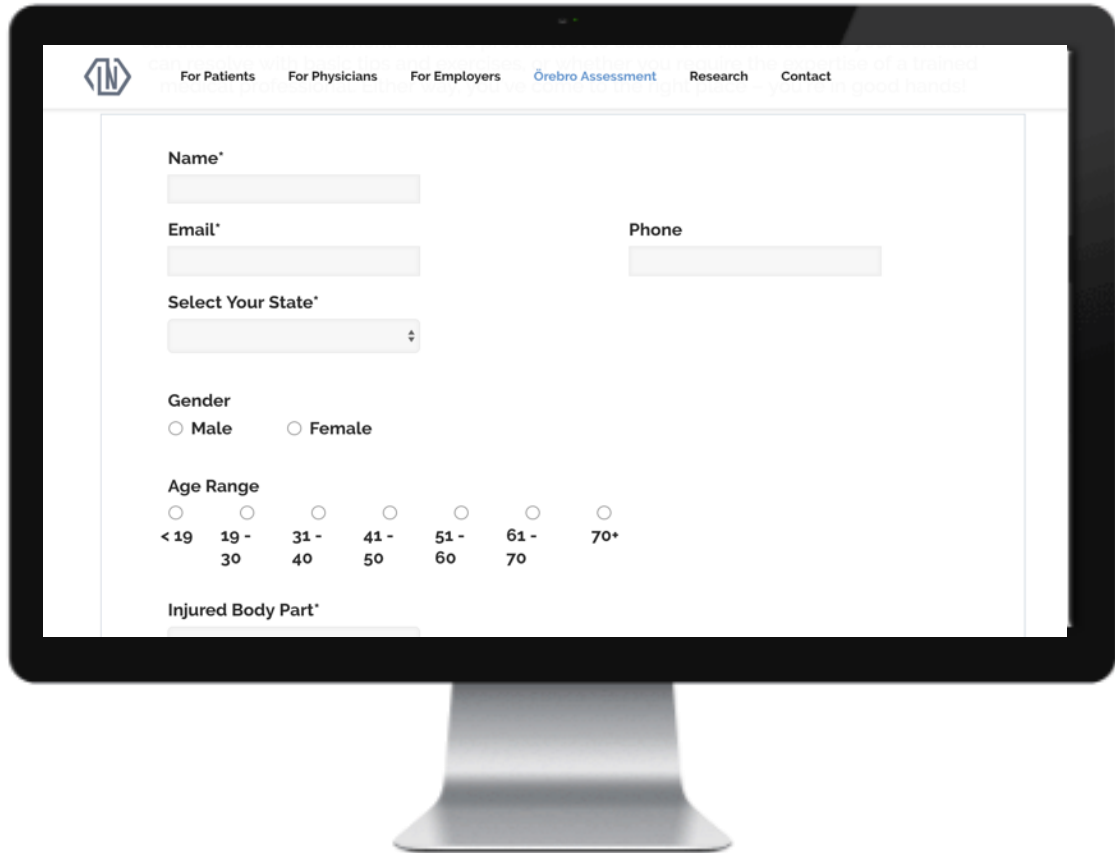


Dr. Sergio Mendoza-Lattes
Co-Director Duke Spine Center
Associate Professor – Orthopedic/Neuro Surgery



What's the Alternative?

How can you ensure the injured worker gets on the right path??



Start the Process

www.StopInjuryNow.com



Assess Risk of Becoming Chronic

During the past 2-3 days, rate how tense or anxious you have felt. *

0 1 2 3 4 5 6 7 8 9 10

Not at all

Extremely

During the past 2-3 days, rate how "depressed" or "down" you have felt *

0 1 2 3 4 5 6 7 8 9 10

Not at all

Extremely

What do you think is the risk that your current pain or problem will not improve? *

0 1 2 3 4 5 6 7 8 9 10

Not at all

Extremely

Think of your life; rate how satisfied you are with your current situation. *

0 1 2 3 4 5 6 7 8 9 10

Not at all

Extremely

How true are the next two statements for you?

Physical activity makes my pain or problem worse. *

0 1 2 3 4 5 6 7 8 9 10

Not at all

Extremely

I should not do my normal daily routine or work with my present pain or problem. *

0 1 2 3 4 5 6 7 8 9 10

Instant Results



stop injury now

[For Patients](#) [For Physicians](#) [For Employers](#) [Örebro Assessment](#) [Research](#) [Contact](#)

YOU COULD BENEFIT FROM SEEING A PHYSIO AT BREAKTHROUGH

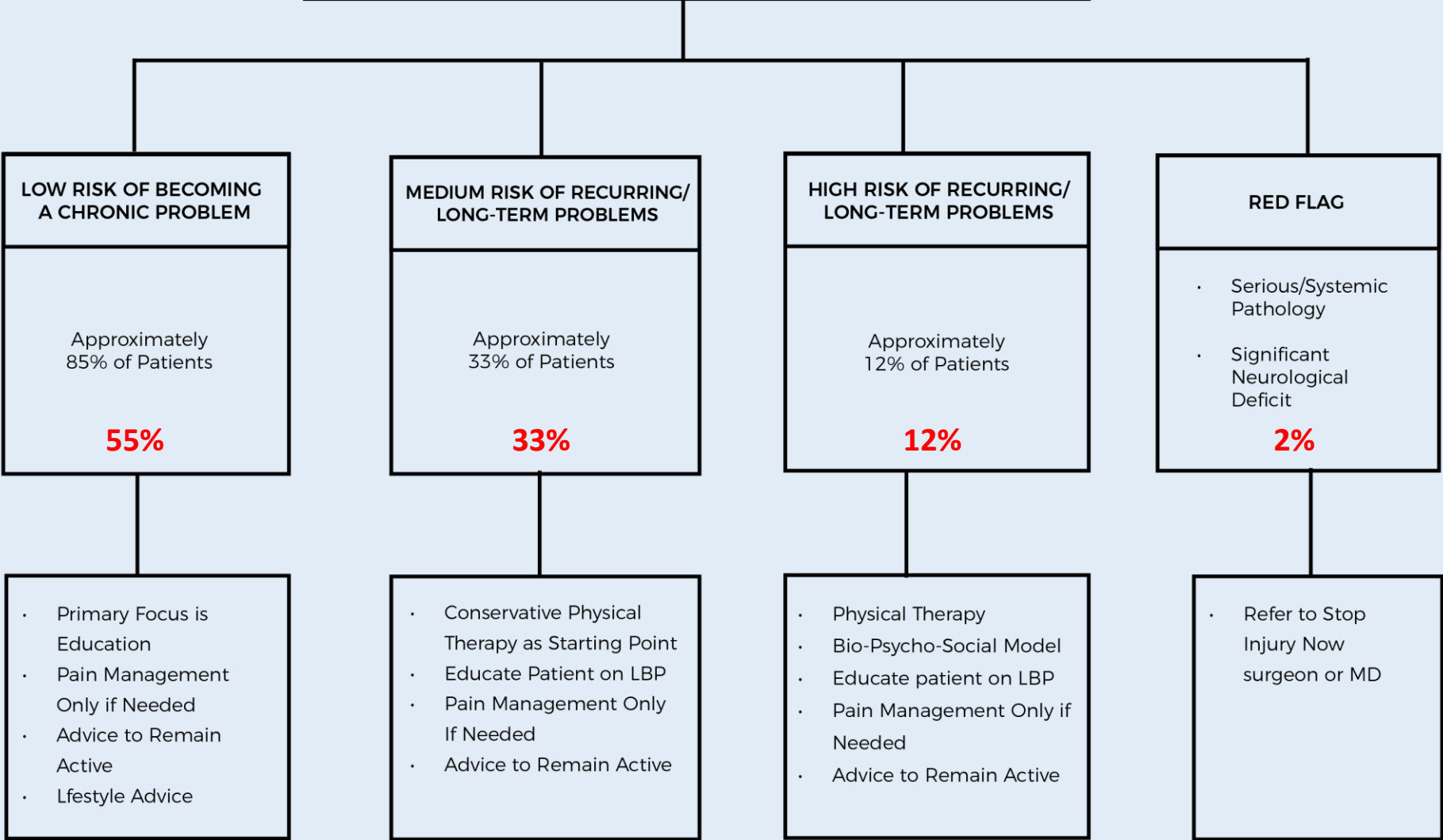
Hello from the Stop Injury Now Team at BreakThrough Physical Therapy! And thank you for choosing to take care of yourself by filling out the Örebro Assessment. This is a proven tool to assess the likelihood that your condition can resolve with basic tips and exercises, or whether you require the expertise of a trained medical professional.

Your score indicates you could benefit from seeing a Physio right away to minimize your symptoms and prevent them from becoming a long term problem. We are here to guide you through the steps and get you back to all aspects of your life as soon as possible.

The research shows that the first step is to see a specialty trained professional as soon as possible. Stop Injury Now is designed to do just that. Please call one of our convenient locations to set up an appointment- [click here](#) to find a list of our locations and phone numbers. We will see you within 24-48 hours and answer all of your insurance and medical questions. We will also give you a call to offer an appointment if we don't hear from you.

Risk Levels/Actions

OREBRO MUSCULOSKELETAL SCREENING TOOL



Stop Injury Now Pathway



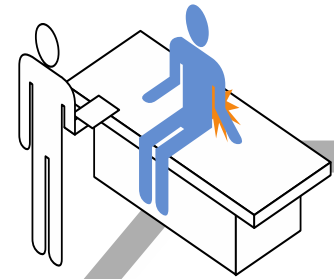
stop injury now

Injury occurs at work

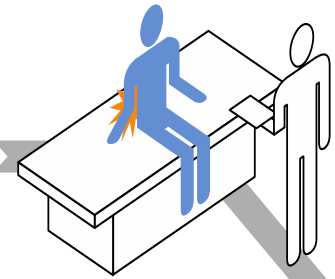


The Current System

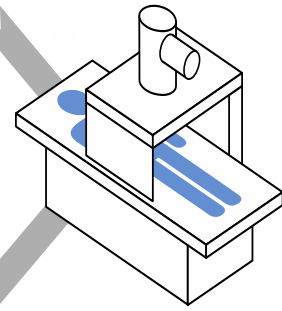
- Unnecessary care will **COST** your company **30-50% MORE**
- Delay return to work
- Interrupt the healing process



1 Evaluation with the Primary Care Physician and prescribed pain medication and told to "wait and see"



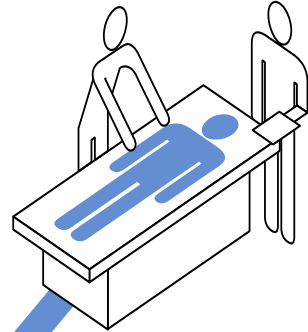
2 Refer to Specialist Physician



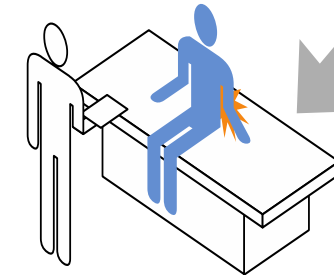
3 Injured worker undergoes several tests to determine injury

StopInjuryNow Pathway

- **SAVE** your company up to **50%** in medical costs
- Our care is based on the latest evidence
- Patient is seen within 24-48 hours and healing process begins immediately after injury



1 Injured worker is screened. Fast tracked to appropriate treatment team of physical therapist or orthopaedic surgeon.



4 Injured worker follows up with Physician and appropriate course of action is determined: injection, surgery and/or physical therapy



*Contact StopInjuryNow for supporting research.



New VR Pilot – PNE via VR

Introducing the Latest Concepts of Pain:

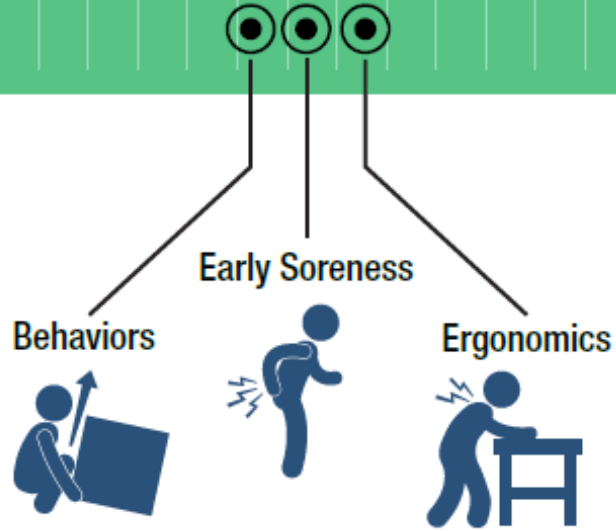
- How Pain Really Works
- How You Can Take Control of Pain
- Meditation/Mindfulness
- Breathing
- Outcome Measures

Results to Date:

- Outcomes
- Patient Feedback
- Next Steps



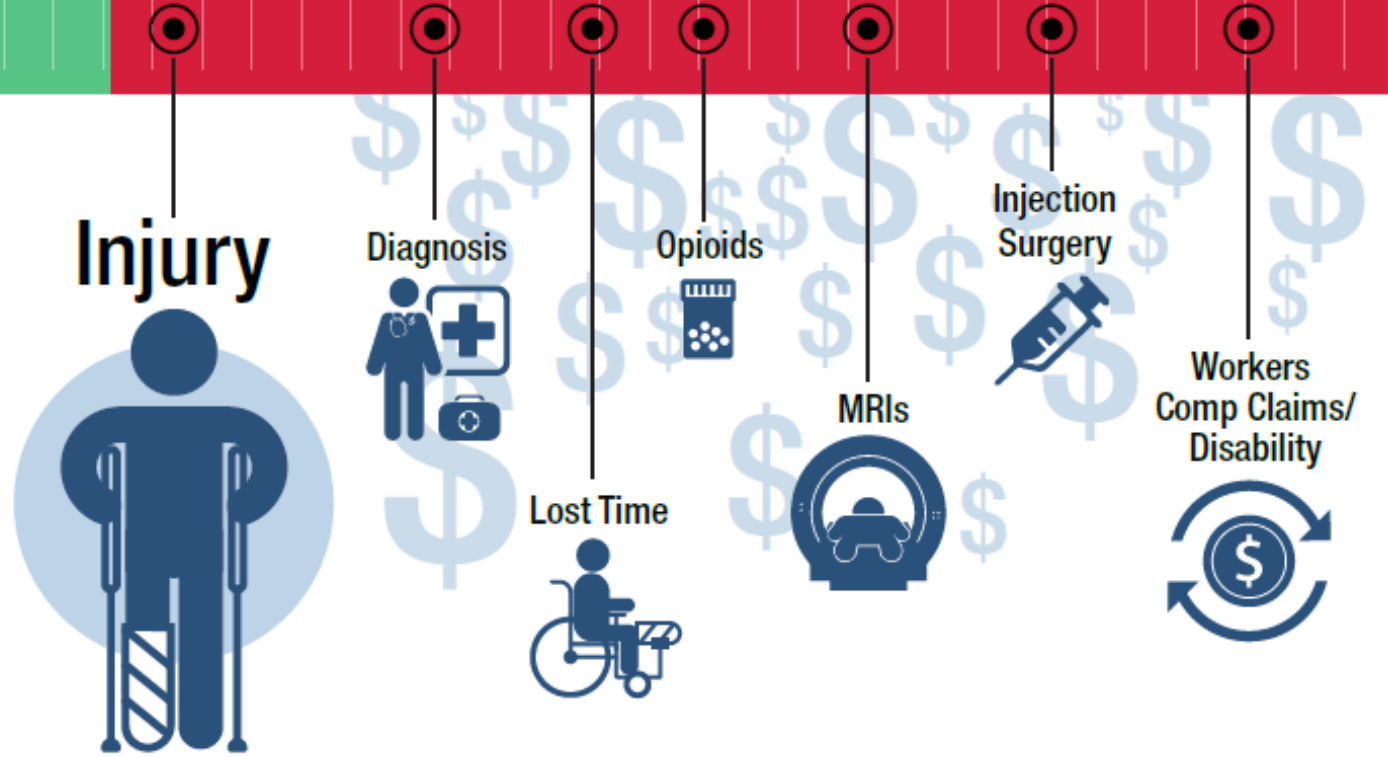
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**50% Reduction
in Costs**

POST-INJURY



THANK YOU!



Questions? Want to request more info or references for the data presented?



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