

Ergonomics in Today's Changing Workplace

Office, Industrial and Tactical Ergonomics
Program

Today's Agenda

- Workplace risk factors for WRMSDs
- Recognize financial impact
- Discuss cost drivers and loss categories for public sector employees
 - Office work environment
 - Industrial and field worker
 - Tactical work in police and fire/medical service
- Describe solutions to reduce risk
- Examine a model program
- Predict outcomes

Identified Risk Factors

- Forceful exertions (*sustained beyond minimal effort*)
- Repetition/prolonged activity (*without adequate rest or recovery*)
- Awkward posture (*non-neutral position*)
- Static posture (*sustained position*)
- Contact or mechanical compression (*compromised circulation*)
- Vibration (*whole body or local*)

Cost and Loss Drivers

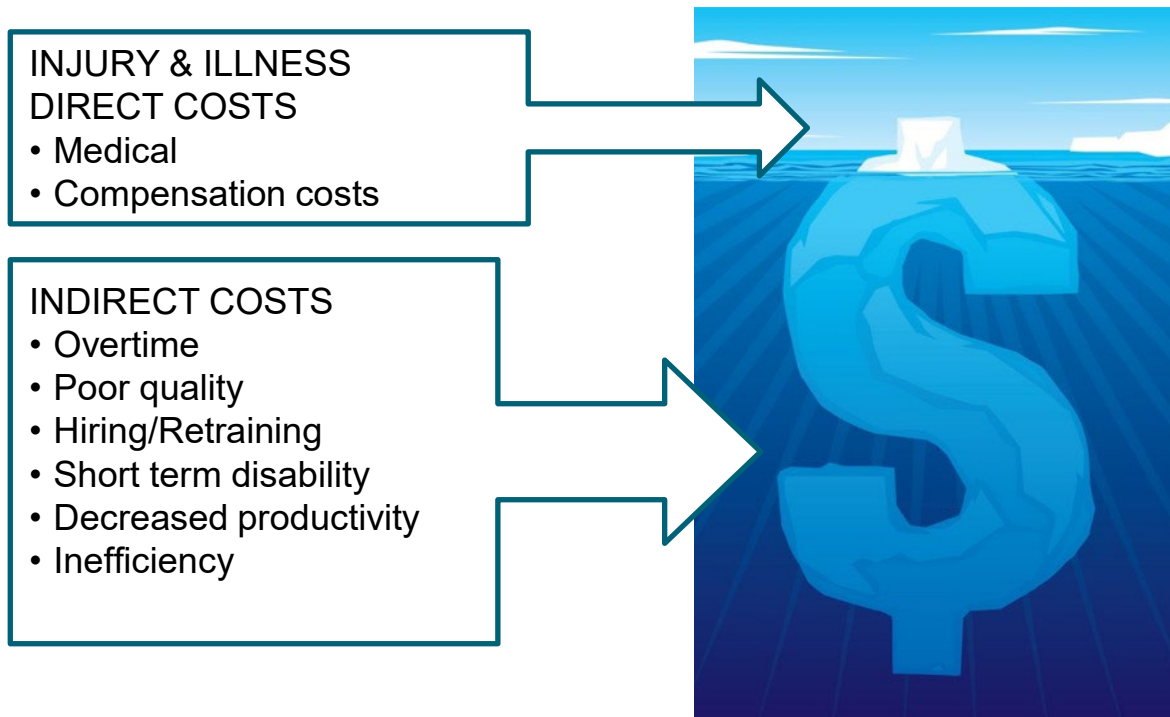
Lower back pain is a common problem

- Chronic back pain is a leading cause of work limitations
- Back pain is a leading cause of work-loss days
- Back pain is a leading cause of work limitations
- Healthcare expenditures are high for adults with back pain
- Adults with any type of low back pain take > number of prescription medications

Source: Health Policy Institute - Georgetown University

<https://hpi.georgetown.edu/backpain/#:~:text=Nearly%2065%20million%20Americans%20report,condition%20in%20the%20United%20States.>

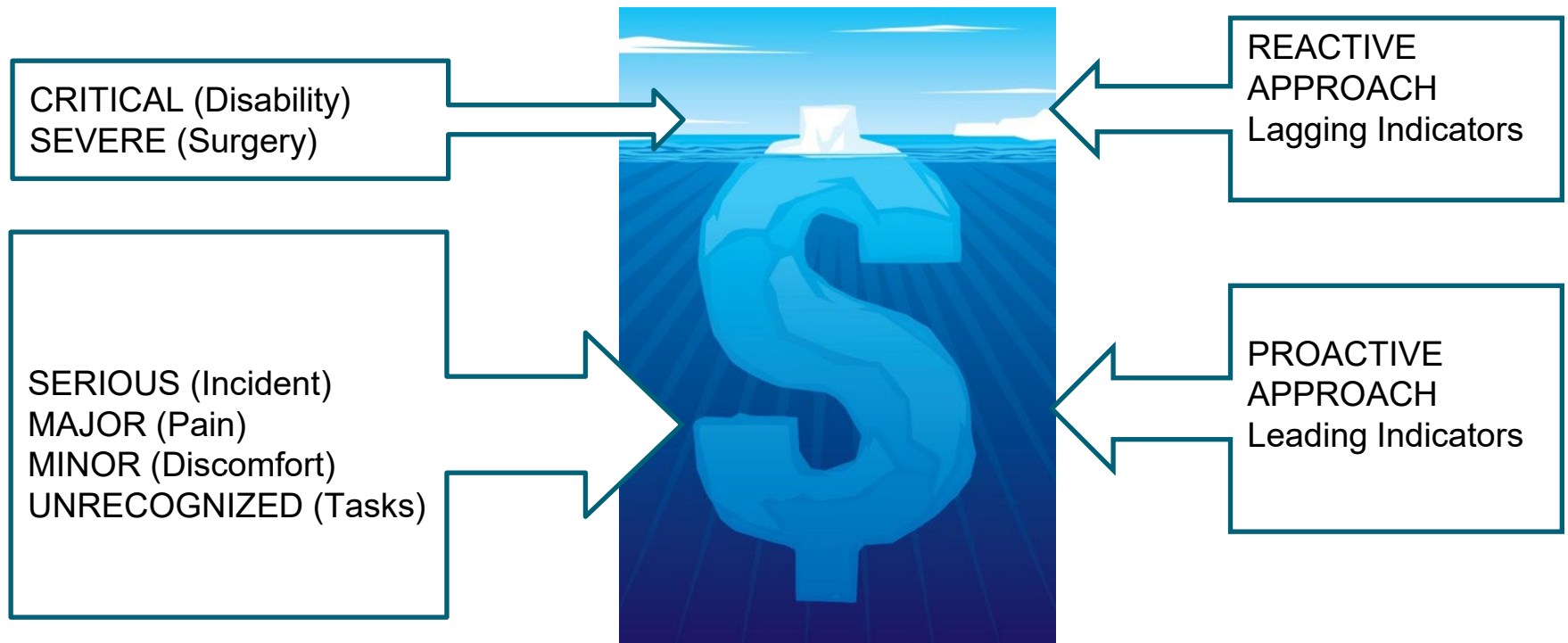
WRMSDs Cost Iceberg



Financial Impact of WRMSDs

- Overutilization of healthcare services
- Chiropractic care, emergency room, urgent care, prescription medication, physical therapy, physicians and diagnostic testing
- Medical treatment of musculoskeletal concerns drive healthcare costs
- Claims resulting from WRMSDs tend to be longer-term and ongoing
- Potential to reopen a workers' compensation claim
- Impairment or disability rating with an award

Closer View of WRMSDs

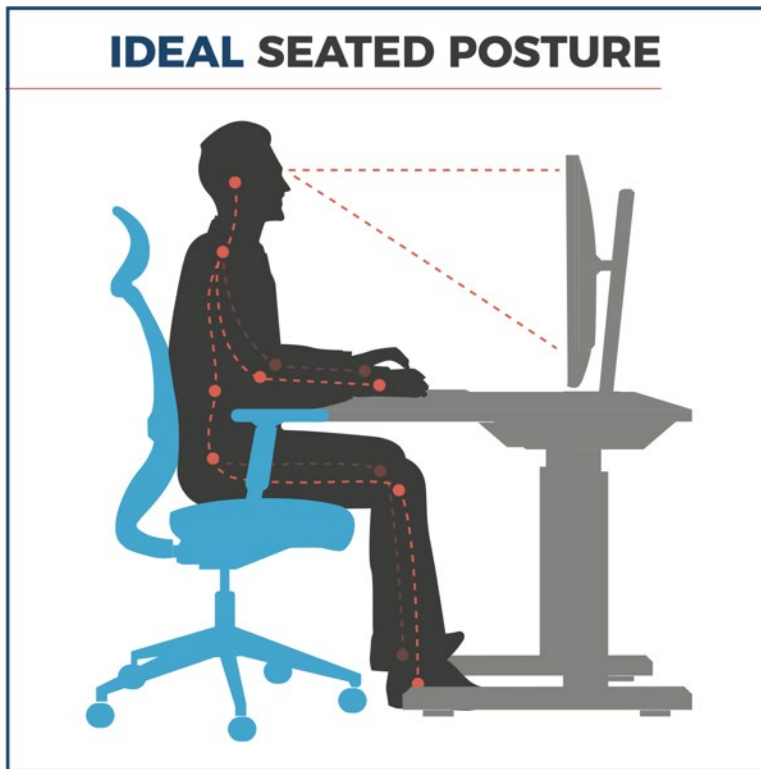


Reduce Expenses

- Complete a workers' compensation claims review and loss analysis
- Relate how the traditional model feeds medical utilization
- Focus on prevention and root causes
- Estimate the return on investment
- Calculate the cost-benefit analysis of alternatives

Making Improvements

Office Workspace



Discarded equipment
Mechanical failure
Poor design and layout
Underappreciated fit
Lack of seating standards
Legacy furniture
Desktop sit-to-stand converters

Challenges

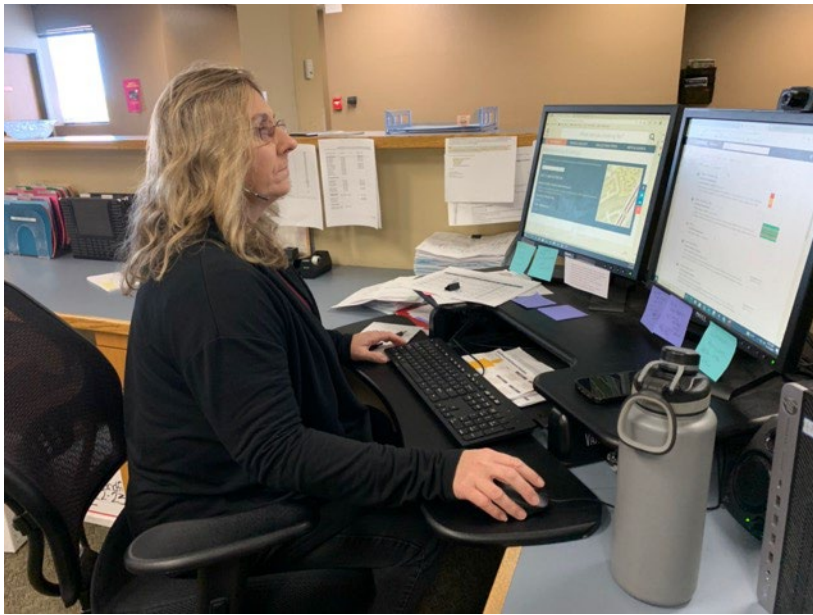


Furniture, equipment and work environment

- Low quality, outdated, and poorly designed workspaces
- One size fits all mindset
- Procurement of equipment based on budget considerations

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Before



After



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Before

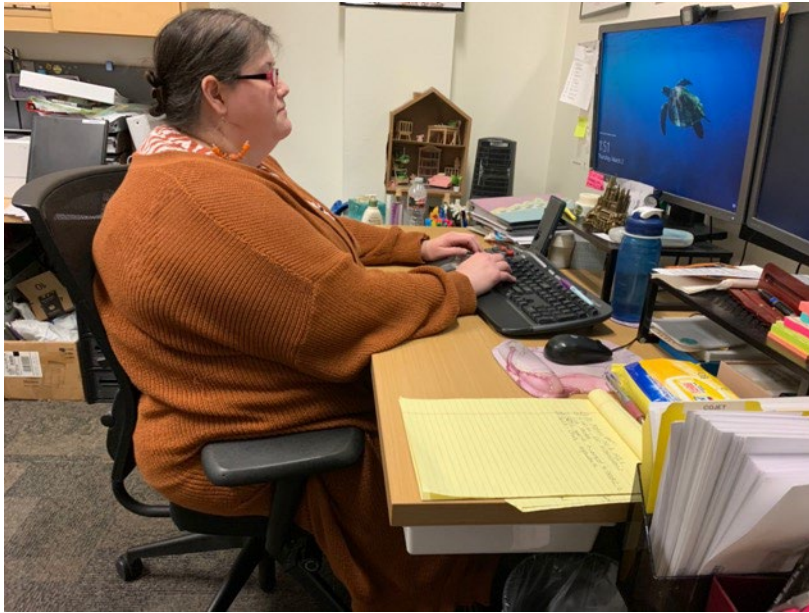


After



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Before



After



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Before



After



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Key Items

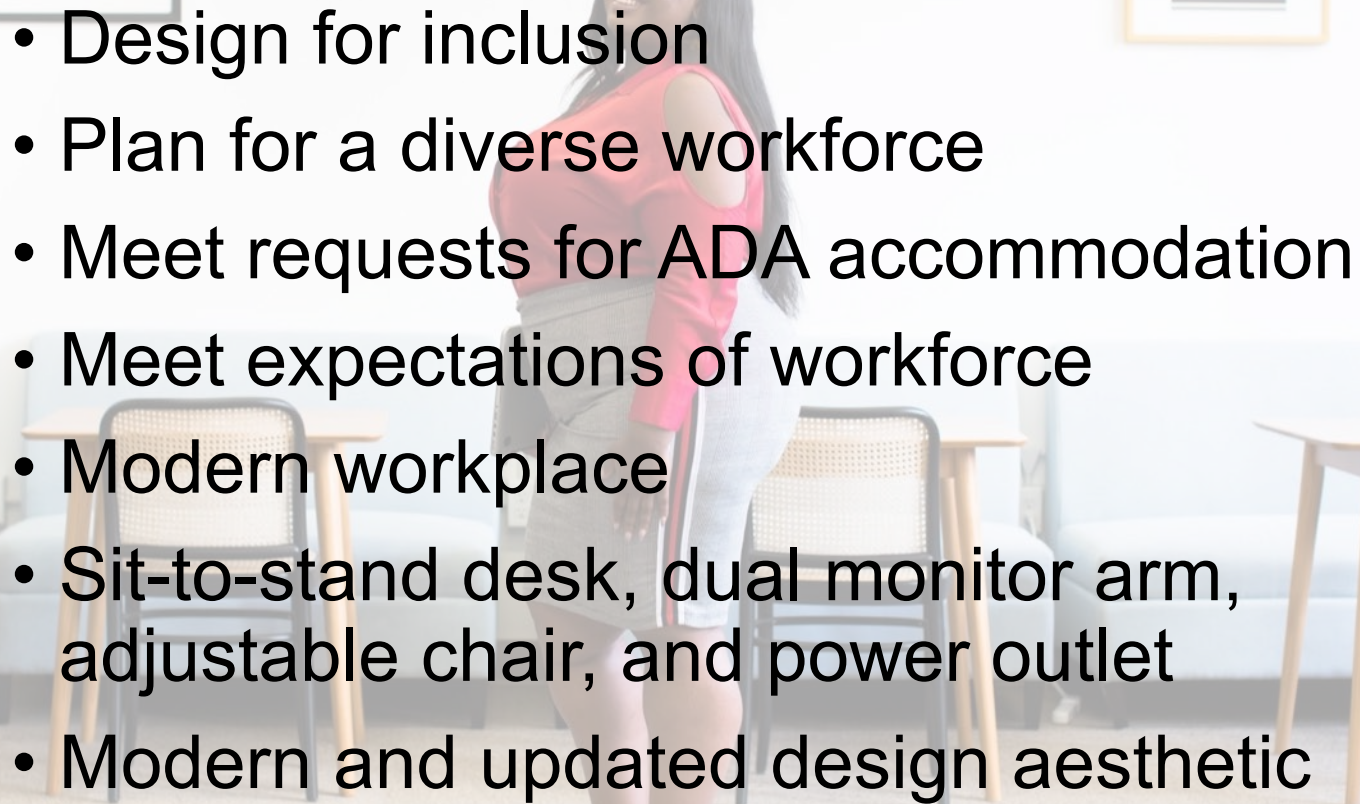
Standardization

- Seating
 - On-demand
 - Special order items
- Sit-to-stand desks
- Monitor arms
- Power outlets
- Accessories

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- **Assessments** (January– September 2023)
 - 224 New requests
 - 62 Follow-up requests
 - 3 Workers' compensation claim requests
- **Positive employee feedback and reviews**
- **Resolution of concerns with follow up visit**
- **Training and Education**
 - Employee ergonomics training and awareness module
 - Seating features and adjustability video available
 - Resources and handouts for employee

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- 
- Design for inclusion
 - Plan for a diverse workforce
 - Meet requests for ADA accommodation
 - Meet expectations of workforce
 - Modern workplace
 - Sit-to-stand desk, dual monitor arm, adjustable chair, and power outlet
 - Modern and updated design aesthetic

Industrial and Field Work

- Aging workforce
- Obesity trends
- Cumulative trauma
- Overexertion injuries
- Chronic health problems
- Heavy equipment and constraints



Case Studies

- Code enforcement called to remove political election signs
- Two (2) workers' compensation claims
- Body part: Shoulder



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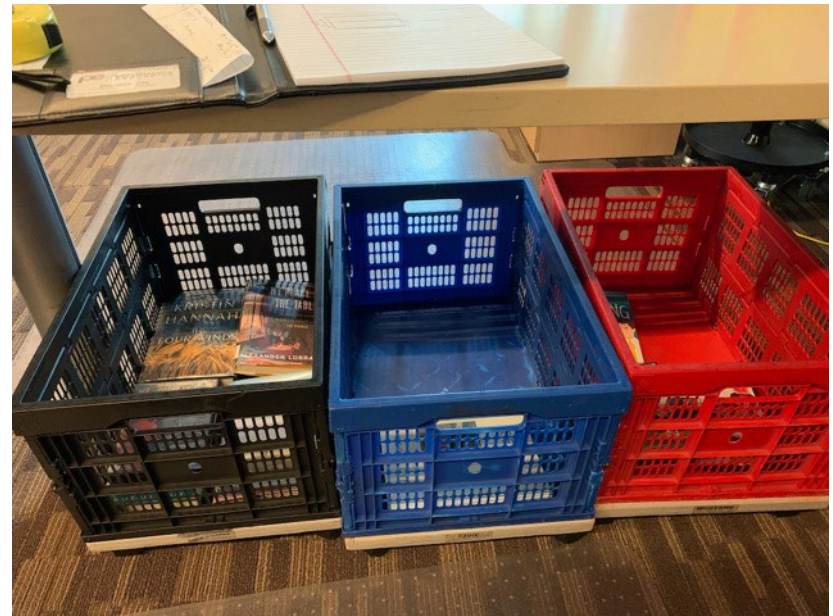
	Lost Days	Restricted Days	Total Paid	Total Incurred
Employee # 1	0	15	\$1,628	\$1,628
Employee # 2	14	104	\$24,015	\$99,670

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Library Assessment



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Library Assessment (cont'd)



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Dumpster Assessment



Tactical Workers

- Unpredictable work environment
- Job demands with high levels of activity and exertion
- Training and conditioning
- Overexertion injuries and nagging discomfort
- No other alternative to reporting an “injury” – drives medical costs



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Vehicle Assessment



Solutions for Reducing Risk

- Focus on design for the end-user
- Become a fully accommodating workplace
- Create an ideal work environment
- Account for individual differences
- Plan for adjustability and future goals
- Redesign the delivery of health and safety services

Model Programs

Office ergonomics program

- Offer face-to-face assessments
- Develop product standards and vendor relationships
- Be proactive with workplace design
- Develop relationships with others in your organization
- Prioritize proper seating and work surface design

Model Programs (continued)

Health and safety program

- Include awareness of ergonomics
- Complete a post-incident investigation and action plan
- Outline a root cause analysis process for MSDs
- Involve frontline employees and supervisors in the process

Model Programs (continued)

Tactical athlete's injury care and prevention program

- Develop a wellness program for public safety employees
- Implement early intervention and onsite treatment
- Focus on fitness to reduce the risk of injury
- Integrate principles of ergonomics to improve key metrics

Benefits of Ergonomics

- Improved productivity
 - Time away from task
 - Call out, sick time or medical leave
 - Efficiency with performing duties
- Lowered healthcare costs
 - Ongoing medical costs
 - Workers' compensation
 - Injuries or illness (time loss)
 - Chiropractic care & alternative healthcare
- Quality
 - Improved accuracy
 - Ability to focus without distraction

Summary

Create an ideal work environment

- Strive beyond providing the basic practical space to envision that tools, equipment, and space are designed well for human use.

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