Prevention and Management of Occupational Injury and Illness in Manufacturing Utilizing Function-Based Analysis

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At Harley Davidson Motor Company
Everything is About The Road Ahead

Presentation Overview

- Harley Davidson – The Employer
- Understanding Functional Management
- The Corporate Decision Process
- Management and Metrics
- Determining the Potential ROI of Functional Programs

Harley Davidson - The Employer

- 14 U.S. Locations
  - Includes museum, testing grounds, product development, manufacturing and distribution
- 4 International Subsidiaries
- Labor groups
  - USW and IAMAW two largest union groups
  - 63.2% employee population is labor affiliated

Harley Davidson - The Employer

- Demographics
  - 9,292 employees
  - Average workforce age is 45 years old
  - 11.5% of population is over 55 years old
  - 6.3% of population is under 30 years old
  - 7.6% of employees have less than one year of service
  - 36.4% of employees have greater than 10 years of service
  - Female 24.1% and Male 75.9%

Harley Davidson: The Employer

Focused on Best Practice

History of Continuous Improvement

- Health and Safety
- Wellness and Ergonomics
- Process Innovation

Harley Davidson: The Employer

Shaping The Future

- What is our next opportunity for impact?
  - Dealing with an aging workforce
  - Dealing with repeaters
  - Medical costs growing
- Better hiring – better health and productivity
  - How do we hire people who can safely & productively do the job?
  - Managing absence by managing better health
- Recovery and Return to Work for Existing Employees
  - Clinical Recovery Tracking
  - Functional matching in return to work

Understanding Functional Management

Function-Based Assessment - What is It?

Function-Based Assessment is the application of objective, reliable and defensible measures of function performance in managing employee selection, recovery and return to work.

Function-Based Assessment requires availability and accessibility of objective measures of an employee (or prospective employee's) functional abilities, compared with the functional job demand requirements of the intended position.

Understanding Functional Management

- Across industries, 32% of injuries on the job occur with employees who:
  - have less than 1 year on the job (12% in the first 3 months);
  - 50 – 60% occur with employees of 5 years or less on the job (BLS).

- 43% of all days away from work are due to sprains/strains (BLS).

- Workers' Compensation, Sick Leave and Short/Long Term Disability represent 6.3% of payroll; while in-direct costs such as overtime, replacement workers, and job accommodation represent 8% of payroll (MetLife Study, 2003).

Understanding Functional Management

Why is Function-Based Assessment Important?

- Although injury rates are down, associated costs are not down due to double digit inflation of medical costs and associated premiums.
- By 2015, there will be 55 million workers over the age of 45 – most of them will have MSD injury or disability history.
- Employers who implement POET programs typically see a 3:1 – 5:1 return on investment in the first year.

Understanding Functional Management

Applications in the Workplace

- Pre-placement Screening
- Post-offer of Employment Testing
- RTW Evaluations
- Fitness-for-Duty Evaluations
- Functional Baseline
- Therapy Tracking
- Modified/alternate Duties Testing
- Ergonomic testing
- Functional Capacities Evaluation
- Residual Functional Capacities Evaluation
- Own Job Evaluation
- Own Occupation Evaluation
- Any Occupation Evaluation
- Apportionment Documentation
- Continuing Disability Review

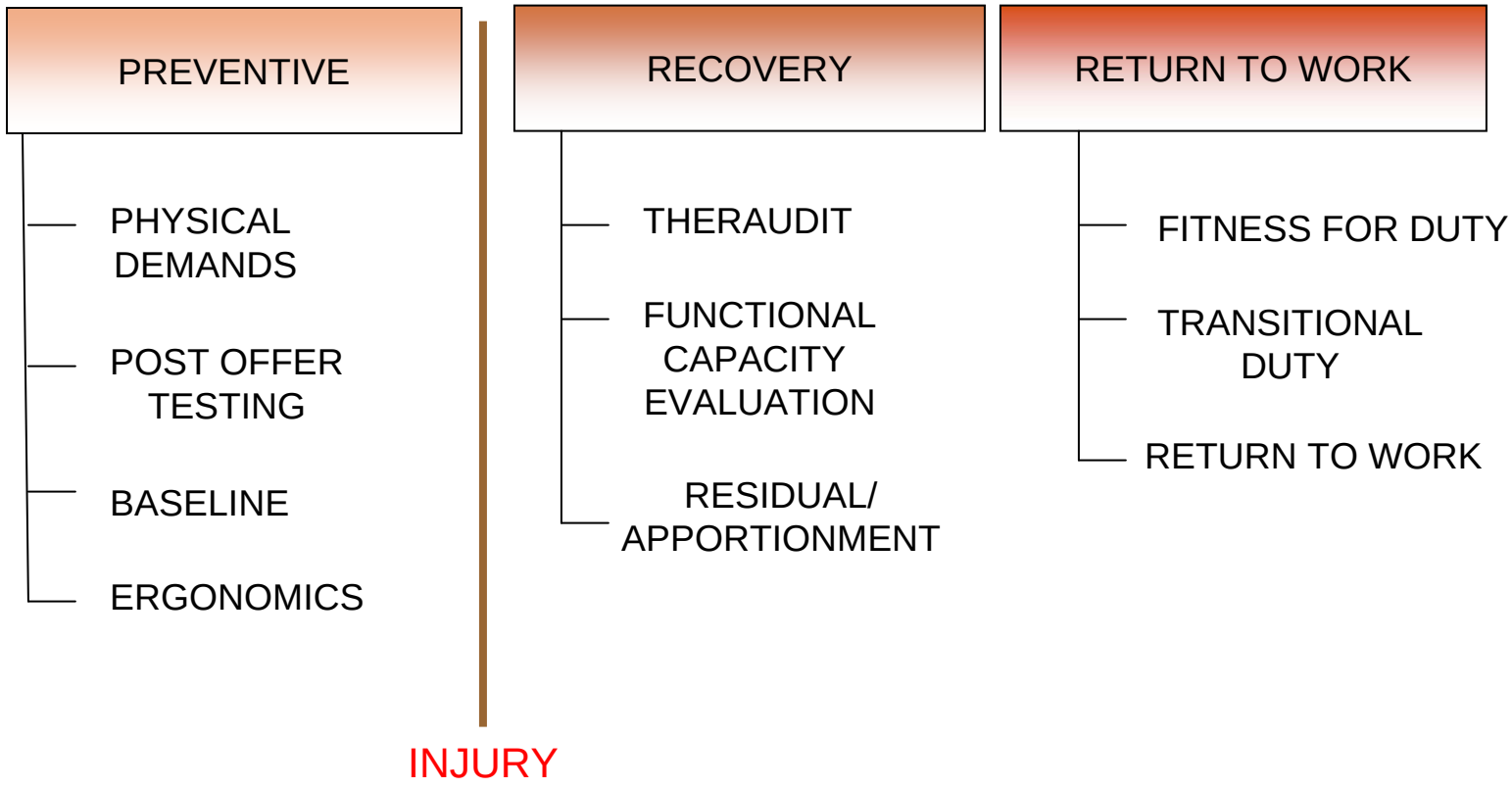
Understanding Functional Management

BTE ER System

- BTE Integrated Software
  - **Cross Validation Among Tests for Consistency of Effort Evaluation**
  - **Data Capture Displays Multi-Trial Force Curves**
  - **Evidence-Based Protocols**
  - Compares Data to Norms
  - Generates Automated Report
- Column/Platform
  - **Simultaneous, Bi-Lateral Functional Measures**
  - **Unlimited Work Simulation**
  - **Electronic Data Capture**
  - **Standardized Dynamic Lift Protocols**
- Functional Range of Motion (F.R.O.M.)
  - Positional Tolerance Linked to Industry Standards
  - Height and Range Assessments
  - Established Protocols
  - Time and Accuracy Measures
- Fine Motor and Dexterity Tests
  - Using Keyboard for Fine Motor/Dexterity Assessments
  - Various finger grip test
- Cardiac Measurement
  - **Real time heart rate monitoring with graph tracking adjacent to demand testing graph**

Understanding Functional Management

The Harley Davidson/BTE Program



Understanding Functional Measurement

Physical Demands Analysis Summary

Occ=Occasional 1 to 33% Freq=Frequent 34 to 66% Cons=Constant 67 to 100%

Strength	Frequency			Weight/ Force	Side	Parameters			
	Occ	Freq	Cons			Height From		Height To	
Lifting - Bobtail Fender	X			22.4 lb	Two Hands	30 in		36 in	
Lifting - Rear Tire	X			54.1 lb	Two Hands	37 in		48 in	
Lifting - Front Fork Assembly	X			52.7 lb	Two Hands	49 in		60 in	
	Occ	Freq	Cons	Weight	Side	Distance			
Carrying - Bobtail Fender	X			22.4 lb	Two Hands	10 ft			
	Occ	Freq	Cons	Force	Side	Height	Rotation	Grip Pattern	Hand Spread
Pushing - bike on carrier	X			55.3 lb	Two Hands	42 in			16 in
Pulling - bike on carrier	X			55.3 lb	Two Hands	42 in	Pronated		16 in

Lifting - Bobtail Fender:

The worker will lift the Bobtail fender off a rack 30 inches in height, the fender is 31 x 13 x 10 inches. The hand placement for this lift is a bilateral neutral grasp, and the weight of the fender is 22.4 pounds.

Lifting - Rear Tire:

The worker will lift the tire onto a small, height adjustable cart to be pushed onto the line and next to the bike. The hand placement for this lift is a bilateral neutral grasp, the height of hands is 40 inches above the ground and the weight of the tire is 54.1 pounds.

Lifting - Front Fork Assembly:

The worker will lift the front fork assembly of the springer bike. The hand placement for this lift is a bilateral neutral grasp, the height of hands is approximately shoulder height and the weight of the front fork assembly is 52.7 pounds.

Carrying - Bobtail Fender:

The worker will carry the Bobtail fender off a rack 30 inches in height, the fender is 31 x 13 x 10 inches. The hand placement for this carry is a bilateral neutral grasp, and the weight of the fender is 22.4 pounds.

Pushing - bike on carrier:

The push force required to overcome inertia to move a Heritage Springer Bike on its carrier is 55.3 pounds. This push is completed at a height of 42 inches, with bilateral extended wrists, palmar surface of the hands making contact with the lights. The tail lights are 16 inches apart. It was observed that the worker, while seated, pushes the bike.

Pulling - bike on carrier:

The pull force required to overcome inertia to move a Heritage Springer Bike on its carrier is 55.3 pounds. This pull is completed at a height of 42 inches, with bilateral pronated grasp of the hands over the tail lights. The tail lights are 16 inches apart.

Corporate Decision Process

1. Define the Need
2. Build an Internal Team
3. Identify Vendors
4. Involve the Stakeholders
5. Select a Partner

Corporate Decision Process

Define the Need

- Claims Experience
- Little Turnover
- Aging Workforce
- Corporate Culture/Goals
- Opportunity for Return on Investment

Overall the right thing to do for employee health and productivity

Corporate Decision Process

Build an Internal Team

Critical – Must Have an Internal Champion

- Determine who will be key in the management and success of the program and include them
- Work with your vendor to create a base level of understanding of program requirements/training programs
- Seek executive buy-in/support through cost benefit analysis, improved wellness, improved productivity and improved absence management
- Set goals and follow strong project management process

Corporate Decision Process

Identify Partnership for Implementation of the Process

- Key Elements
  - Experience
  - Legal Defensibility
  - Measurable/Objective Process
  - Strong Reputation
  - Clear Outcome Documentation
  - Subsequent Utility Beyond Hiring Process

This is a highly regulated process and each potential partner should be seriously evaluated against each of these requirements

Corporate Decision Process

Involve the Stakeholders

- Legal
- HR
- Safety
- Finance
- Risk Management
- Claims
- Medical
- Labor
- Operations

Corporate Decision Process

Select a Partner

Due Diligence

- Identified the services needed from a partner
- Learned new services that were available that we were not aware of
- Picked the top 3 or 4 companies that met the needs
- Selected final partner choice
- Checked references of partner
- Benchmarked with another industry business using partner's program
- Finalized decision based on best match for program goals

Management and Metrics

- Program Implementation
- Program Management
- Benchmarking Success

Management and Metrics

HD	Program Implementation
X	Orientation Meeting
X	Onsite Physical Demands Analysis
	Protocol Development
	Testing Readiness Evaluation
X	ER Delivery and Install
X	Sample Testing
	Data Analysis
X	Finalize Cut Scores
X	Implementation

Management and Metrics

Program Management

- POET
  - Call Center Scheduling
  - Quality Evaluations on Pass/Fail Dispositions
  - Clinical Field Staff Oversight
  - Monthly and Quarterly Reporting
  - Compliance Accountability
- Post Injury
  - JobAble™ Job Matching System
  - Functional Capacity Evaluation Quality Reviews
  - Call Center Scheduling
  - Clinical Field Staff Oversight
- Return on Investment Analysis and Management

Management and Metrics

Benchmarking Success

Goals:

- Reduction in Injury Incidence
- Basis for Ergonomic Improvement Identification
- Reduction in Disability/Loss Time Duration
- Reduction in Claims Costs
- Expedited Return to Work

Measures (Based on 3 Year Comparative History):

- Calculation of Reduction in MSD/Bio-Mechanical Injuries
- Ergonomic Improvements Completed (as reported by HD)
- Calculation of Loss Time Days
- Calculation of Average Cost Per Claim
- (Expedited RTW Will Be Self Reported by HD)

Determining the Potential ROI of Functional Programs

Evaluating Your Company as a Candidate for Program Success

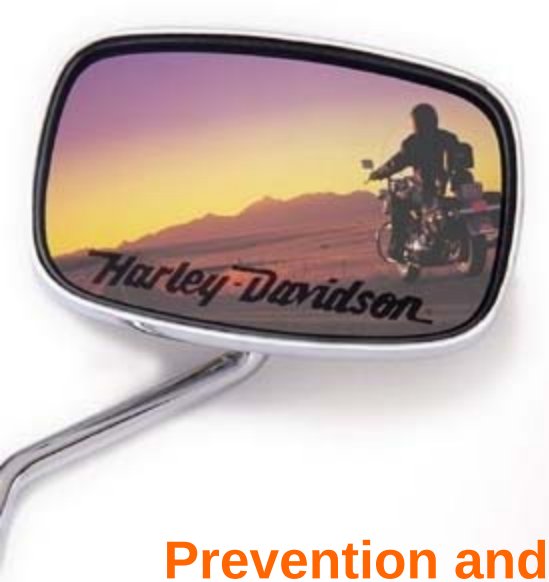
1. Data
   a. What Type of Injuries?
   b. Tenure of Employees Getting Injured?
   c. Age of Employees Getting Injured?
   d. Costs/Durations?
   e. Repeaters?
2. Culture
   a. What is Driving Exposure?
   b. What is the Turnover? What Drives the Turnover?
   c. Is Your Organization Growing or Downsizing?

Management and Metrics

Benchmarking Success

Harley Davidson 2008 Metrics

- 197 Job Candidates Tested
  - 78% of Candidates Passed the Post Offer Test
  - 22% Failed
- Only 1 Claim (Medical Only) Occurred from Tested Hires
  - Claim Cost for that Claim was $879
- Conservative Estimated Net Savings - $259,674



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