

WORKERS' COMPENSATION WEBCAST SERIES

CREATING SAFER WORKPLACES AND REDUCING COSTS THROUGH PREDICTIVE ANALYTICS AND TECHNOLOGY

KEY WORKERS' COMPENSATION AND WORKPLACE SAFETY OBJECTIVES FOR EMPLOYERS

- Employers are seeking to:
 - Prevent injuries in the workplace.
 - Return injured employees to work quickly.
 - Develop sustainable cultures of safety.
- Success in achieving these goals depends on:
 - People — employee health and fitness.
 - Process — specific job functions and tasks.
 - Technology — design of workstations and equipment that employees use.
 - Morale.



HOW JOB DESIGN AND TECHNOLOGY AFFECT WORKPLACE SAFETY

- Ergonomists seek to establish standardized operating procedures and a safer work environment.
 - Goal is for employees to repeat same procedures.
 - Too many or too difficult a task can create distractions.
 - Net result: more injuries, reduced efficiency, and lower quality.
- Employers can reduce risk of injury and expedite return to work by:
 - Adding user-friendly and intuitive elements into job design.
 - Selecting, using, and modifying equipment.



SOURCES OF DATA TO DRIVE BETTER WORKPLACE SAFETY AND WORKERS' COMPENSATION DECISIONS

- Group health, disability and workers' compensation claim data.
- Data collected about individual employers' workforces:
 - Historical injury and illness data.
 - Employee discomfort data collected via surveys.
 - Forward-looking view of potential injuries through predictive risk assessments.



DATA AND ANALYTICS AT HUMAN CONDITION SAFETY

- HC SafeScan™:
 - Artificial Intelligence, 3D Building Information Modeling (BIM), and simulation.
 - Avatar can walk millions of iterations of the site in minutes.
 - Flags for safety hazards, hotspots and construction change orders.
- HC SafeSite™:
 - Safety wearables monitor worker/ asset location and activity.
 - Identifies and predicts hazards, and sends push alerts to prevent injuries in real time.
 - Enables predictive modeling, best practice compliance, and real time reporting audits, resulting in safer workplaces and increased efficiency.



DATA AND ANALYTICS AT HUMAN CONDITION SAFETY

- HC SafeSite™ data applications:
 - Locate and alert employees in potential danger and other nearby employees.
 - Capture body movements to help establish standardized operating procedures.
 - Combining your data with third-party sources to make smarter decisions.
- Drone applications:
 - Job management tool.
 - Can cross-reference data captured by drones with wearable technology and other tools.



WORKPLACE SAFETY APPLICATIONS OF DATA AND ANALYTICS

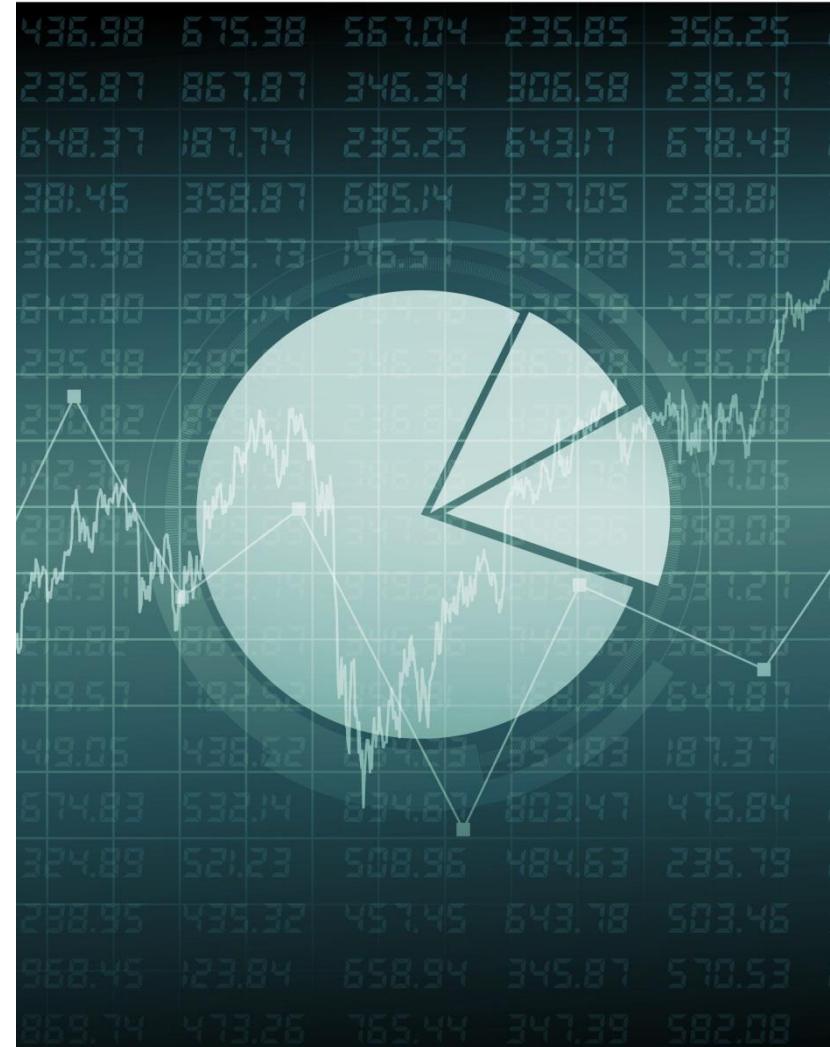
- Predictive risk assessments:
 - Review of worker tasks to determine level of injury risks.
 - Tangible steps to address risk, including redesigning workstations and replacing equipment.
- Six Sigma/lean manufacturing approach:
 - Use risk assessments to refine processes in order to eliminate wasted time and energy.
 - Benefits:
 - Fewer injuries.
 - Greater efficiency.
 - Better product/process quality.
 - Use in tandem with behavioral improvements.

USING DATA TO IMPROVE TRAINING AND EDUCATION

- Risk assessment for beverage manufacturer and distributor with identified back pain and discomfort in workforce.
 - Shoulder injuries identified as risk for distribution employees.
 - Data used to develop training and education programs on proper lifting.
 - Job-specific training built for distribution employees regarding handling of beverage cases and pallets.
- Building technology into training programs:
 - Live-stream training can better present differences between employees' actual work habits and best practices.
 - More interactive learning experience can drive more lasting improvements.

ROLE OF DATA AND ANALYTICS IN UNDERWRITING

- Large account underwriting is generally based on individual experience and attributes.
- Smaller account underwriting supplemented by predictive models.
- Basic submission information:
 - Exposure — payroll by state and job classification.
 - Loss information — claim by claim detail.
- Advanced submissions often include:
 - Demographic information.
 - Details about workplace safety initiatives.

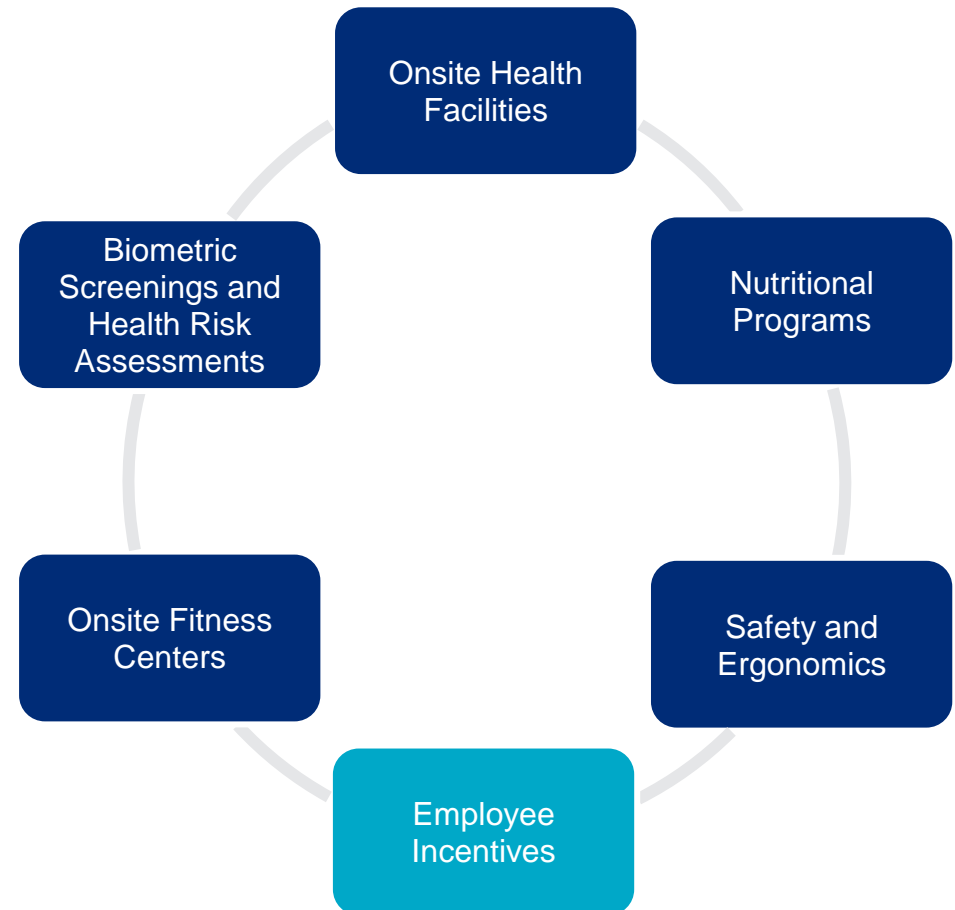


ROLE OF DATA AND ANALYTICS IN UNDERWRITING

- Good data will not guarantee lower rates, but generally benefits insureds.
- Example: employer provided detailed information about job characteristics of injured workers.
 - Insurer was able to better understand employer's true exposure.
 - Employer is using data to identify underlying causes of claims.
- Focus for employers should not be solely on getting the best results in negotiations with underwriters.
 - Use data and analytics to draw tangible insights and take specific actions to improve safety.

INCORPORATING DATA INTO WELLNESS PROGRAMS

- A wellness program can promote healthy behaviors 24 hours a day, 7 days a week.
- Data collected about employees can help identify specific initiatives:
 - Anti-smoking.
 - Weight reduction.
 - Physical fitness.
 - Nutrition.
 - Vaccinations.
 - Safety.
 - Stress relief.



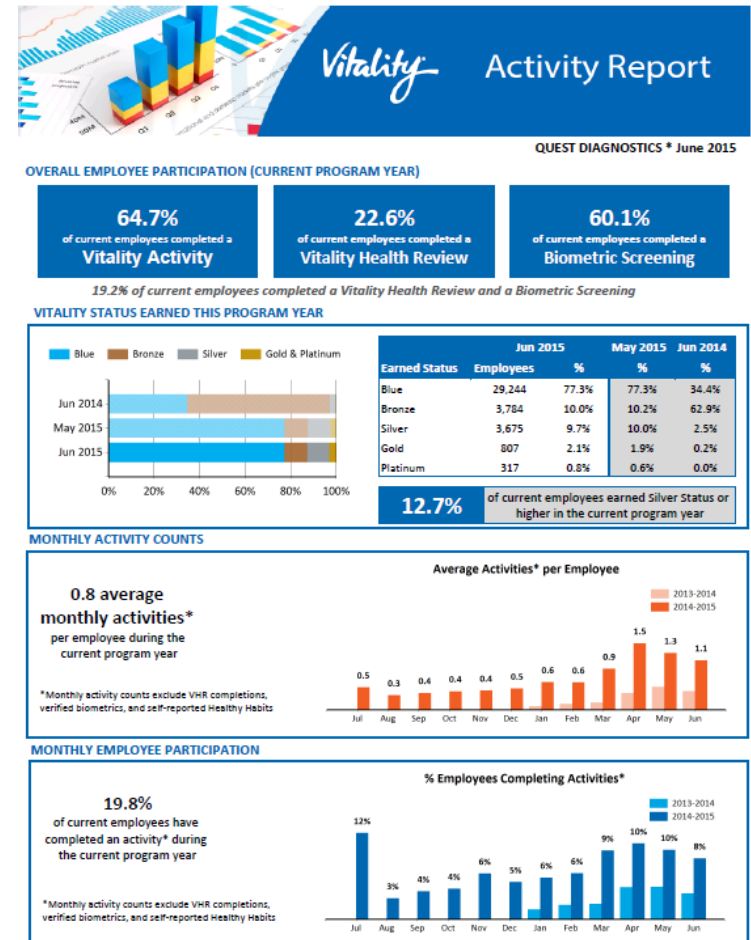
WEARABLE DEVICES IN WELLNESS PROGRAMS

- Half of all fitness wristband sales are made by businesses that intend to share them with employees.
- Corporate wellness applications:
 - Financial incentives for employees based on achieving set goals:
 - Health insurance savings.
 - Gift cards.
 - Discounts.
 - Competition among offices or departments.



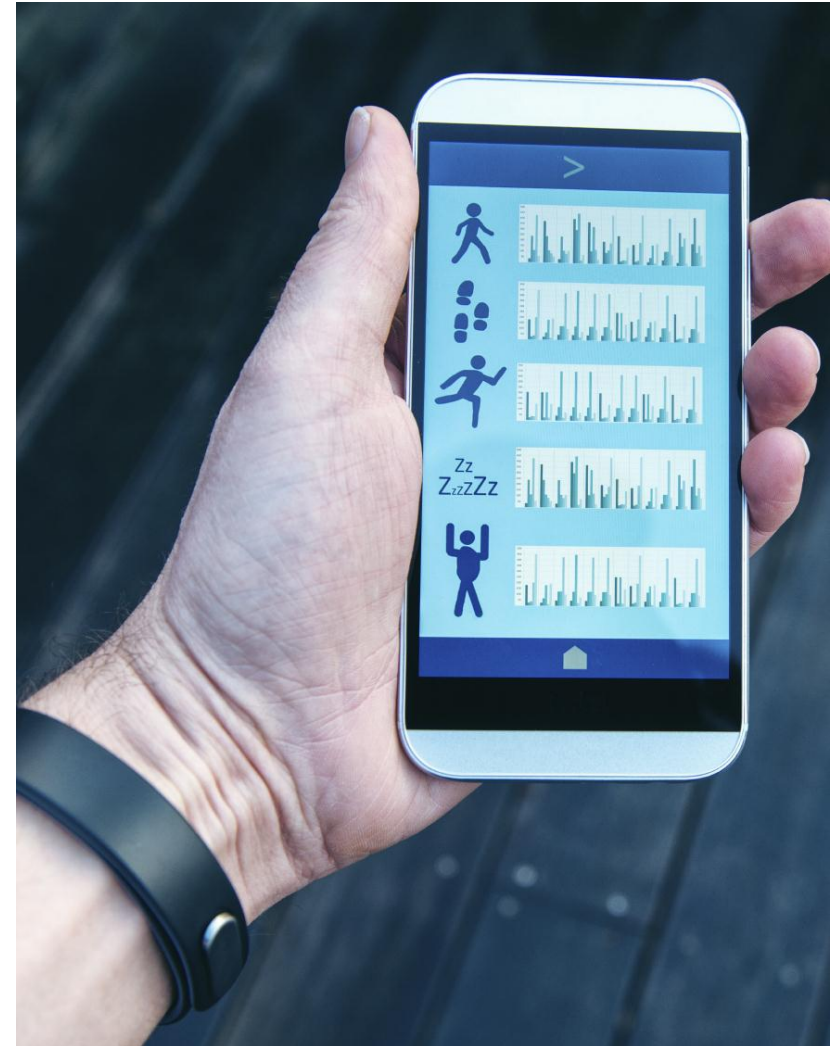
WEARABLES AND WELLNESS AT QUEST DIAGNOSTICS

- Quest Diagnostics uses wearables with the help of Vitality, an outside vendor.
- Data collected by Vitality tracks:
 - Steps taken.
 - Time allotted to fitness activities.
 - Check-ins at gyms.
 - Employee self-reports.
- Employees set goals and track their progress.
- Scorecard is presented to leadership each month, and wearables data is combined with other information collected through wellness programs and other means.



WEARABLES AND WELLNESS AT QUEST DIAGNOSTICS

- More than 50 employee success stories collected in recent Spring campaign.
 - Lessons learned to be incorporated into next employee challenge.
- Employees purchase devices on their own.
 - Wearables offered in RecognitionQuest program.
- 34 percent of employees registered in Vitality program.
- HIPAA waiver explains to employees that personal data is de-identified and used only for Quest wellness programs.



CLOSING THOUGHTS

- More specific injury and illness data captured through ICD-10 codes can help employers:
 - Improve injury prevention programs.
 - Aid return-to-work efforts.
 - Refine wellness programs.
- Keys to using wearables:
 - Educate workforce about benefits for them and the company.
 - Discuss with legal advisors.
- Don't focus solely on insurance premium benefits of data and analytics.
- Looking ahead: Safety-related data will be real-time and mobile, providing concrete applications for leading-edge companies.



MARSH'S WORKERS' COMPENSATION CENTER OF EXCELLENCE



Marsh's Workers' Compensation Center of Excellence provides clients with a holistic approach to managing their workers' compensation programs. Our Workers' Compensation COE delivers advanced analytics and modeling, pre- and post-loss strategies, claims management and advocacy, and optimal program design and placement.

To learn more about Marsh's Workers' Compensation COE, visit www.marsh.com.



This document and any recommendations, analysis, or advice provided by Marsh (collectively, the “Marsh Analysis”) are not intended to be taken as advice regarding any individual situation and should not be relied upon as such. This document contains proprietary, confidential information of Marsh and may not be shared with any third party, including other insurance producers, without Marsh’s prior written consent. Any statements concerning actuarial, tax, accounting, or legal matters are based solely on our experience as insurance brokers and risk consultants and are not to be relied upon as actuarial, accounting, tax, or legal advice, for which you should consult your own professional advisors. Any modeling, analytics, or projections are subject to inherent uncertainty, and the Marsh Analysis could be materially affected if any underlying assumptions, conditions, information, or factors are inaccurate or incomplete or should change. The information contained herein is based on sources we believe reliable, but we make no representation or warranty as to its accuracy. Except as may be set forth in an agreement between you and Marsh, Marsh shall have no obligation to update the Marsh Analysis and shall have no liability to you or any other party with regard to the Marsh Analysis or to any services provided by a third party to you or Marsh. Marsh makes no representation or warranty concerning the application of policy wordings or the financial condition or solvency of insurers or reinsurers. Marsh makes no assurances regarding the availability, cost, or terms of insurance coverage.

Marsh is one of the Marsh & McLennan Companies, together with Guy Carpenter, Mercer, and Oliver Wyman.

Copyright 2015 Marsh LLC.
All rights reserved.