

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

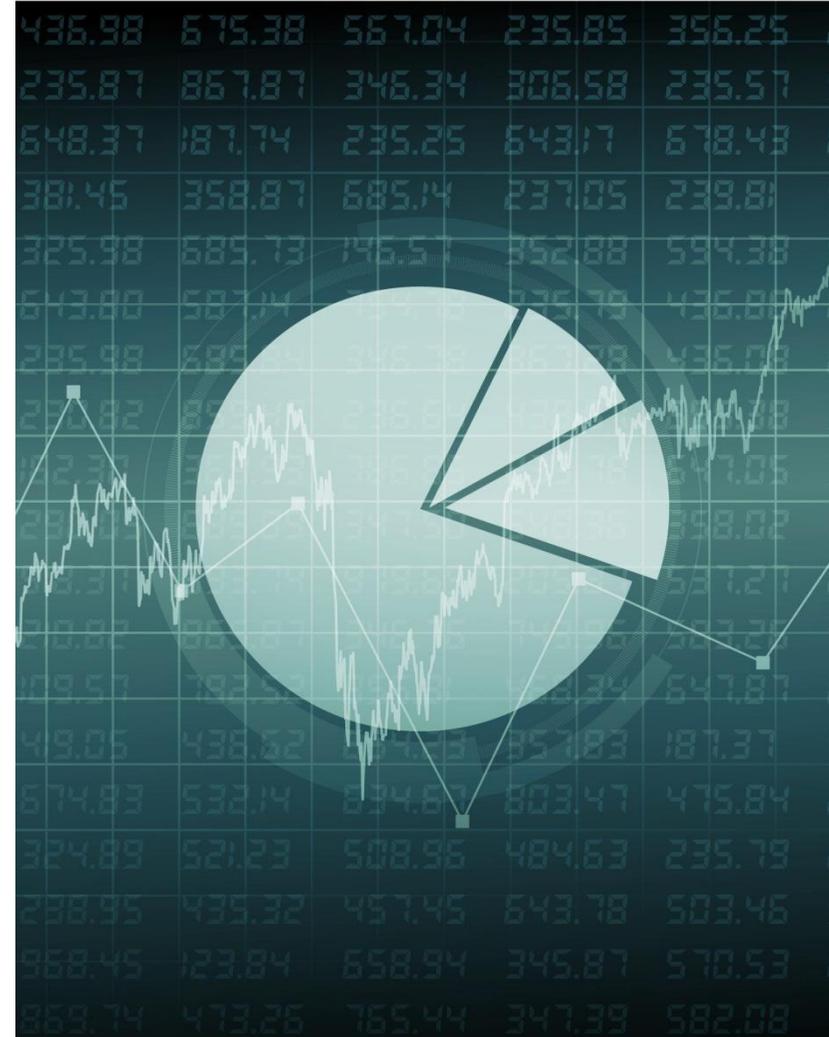
- Predictive risk assessments:
 - Review of worker tasks to determine level of injury risks.
 - Tangible steps to address risk, including redesigning workstations and replacing equipment.
- Six Sigma/lean manufacturing approach:
 - Use risk assessments to refine processes in order to eliminate wasted 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.

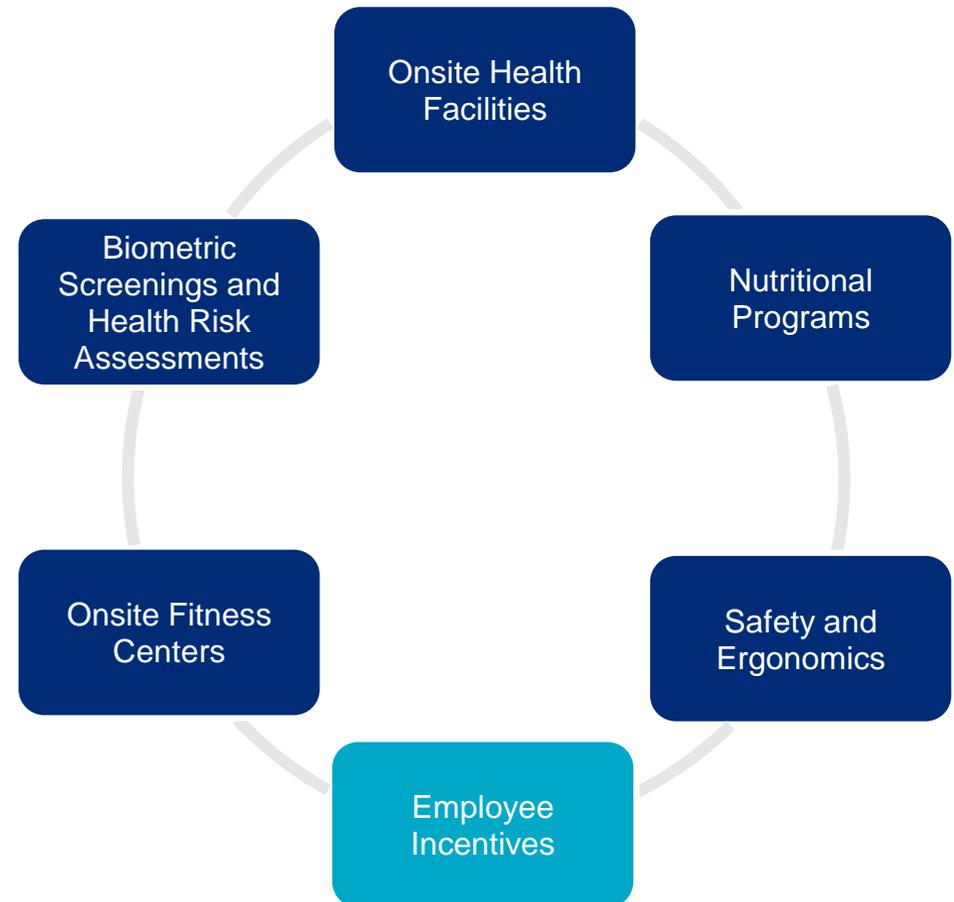


ROLE OF DATA AND ANALYTICS IN UNDERWRITING

- 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.



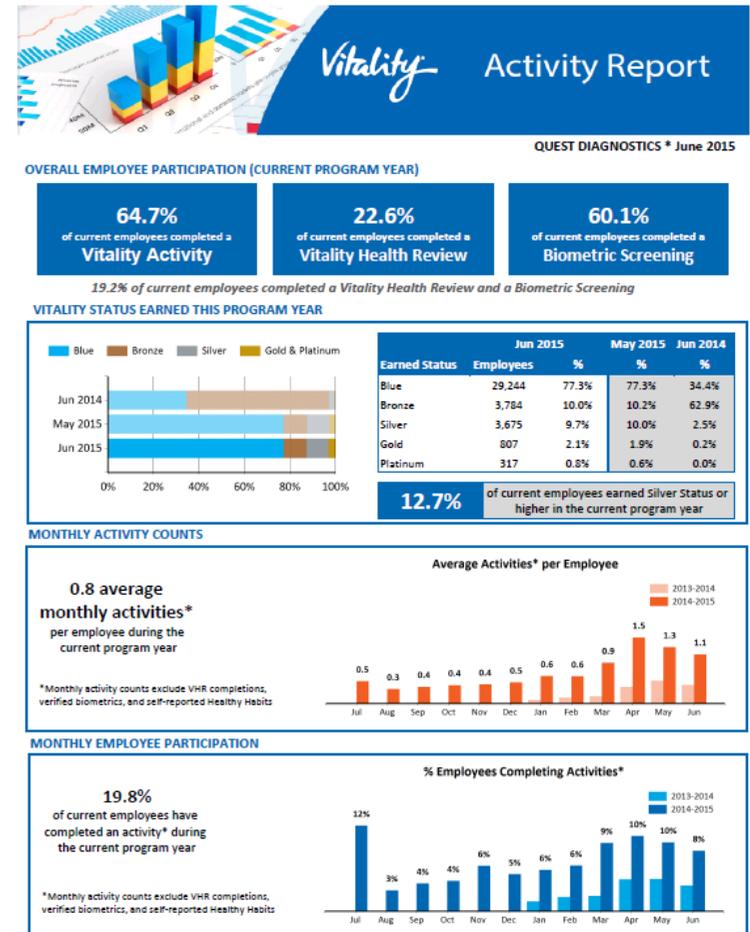
WEARABLE DEVICES IN WELLNESS PROGRAMS

- 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.



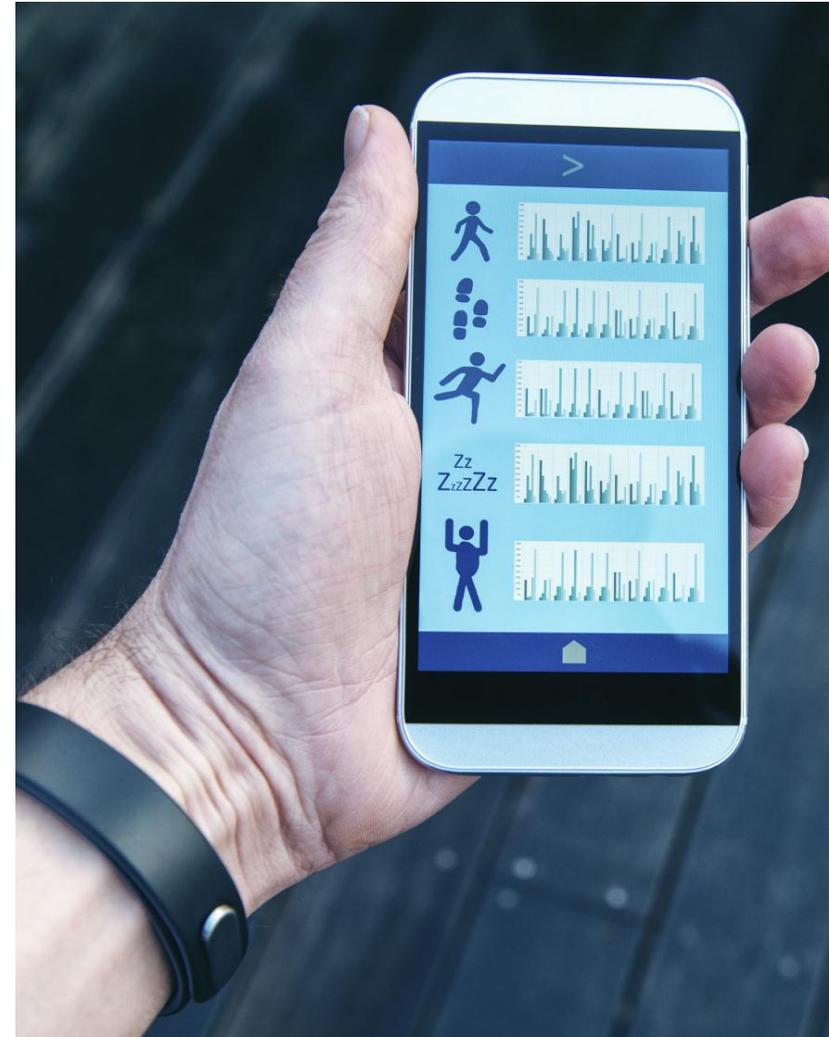
WEARABLES AND WELLNESS AT QUEST DIAGNOSTICS

- 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-and mobile, providing concrete applications for leading-edge companies.



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