

Malco Products, Inc., Barberton

Intervention Key Words: Lifting, Automation, Elevated lift table, Hydraulic lift

Industry: Manufacturing

Risk Factor(s): Repetitive motion, Manual Handling- Lifting/Carrying, Awkward Posture- Neck deviations, Back deviations, Wrist deviations

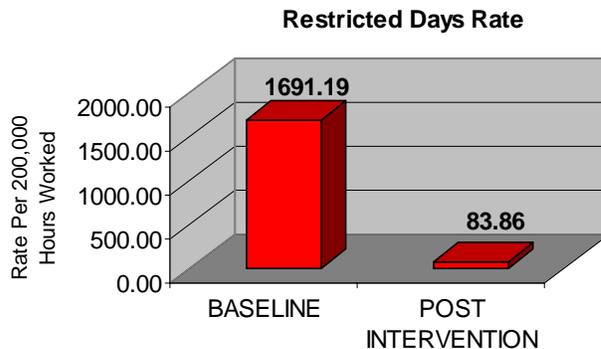
Situation:

Malco Products Inc. bottles and packages products ranging from automotive chemicals to commercial cleaning supplies. The process involves filling various sizes of bottles/containers and packing them into cases for shipping. Once the cases are filled, they are sealed with tape and then palletized. Workers at Malco have the task of packing and palletizing the products, while the filling and taping are done mechanically. Depending on the size of the container, they are expected to pack up to 60 containers per minute in order to maintain the pace of the machines. Individual bottles can range from 2 lbs up to 9 lbs, while the packed cases can weigh up to 36 lbs. Over time, there is a significant risk for Cumulative Trauma Disorders (CTDs) associated with the repetition, twisting motions and lifting involved in performing these duties. The frequency of the task and the weight of the load consistently placed on the worker have been proven to cause injuries to the back, neck, shoulders, arms and wrists.

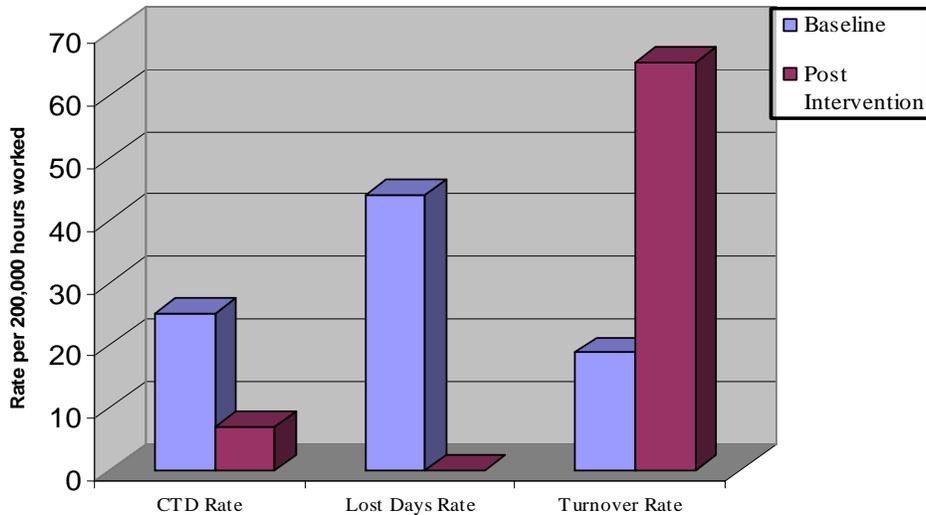
Solution:

To reduce the CTD risk, Malco Products incorporated a series of automated case packers and palletizers in their production lines. These machines have the ability to pack the cases and load them onto pallets without human intervention during the entire process. These improvements have impacted approximately 50 employees involved with the packing process. Malco Products Inc. was awarded \$39,445 from Safety Grant\$ to help offset the costs involved with implementing the improvements.

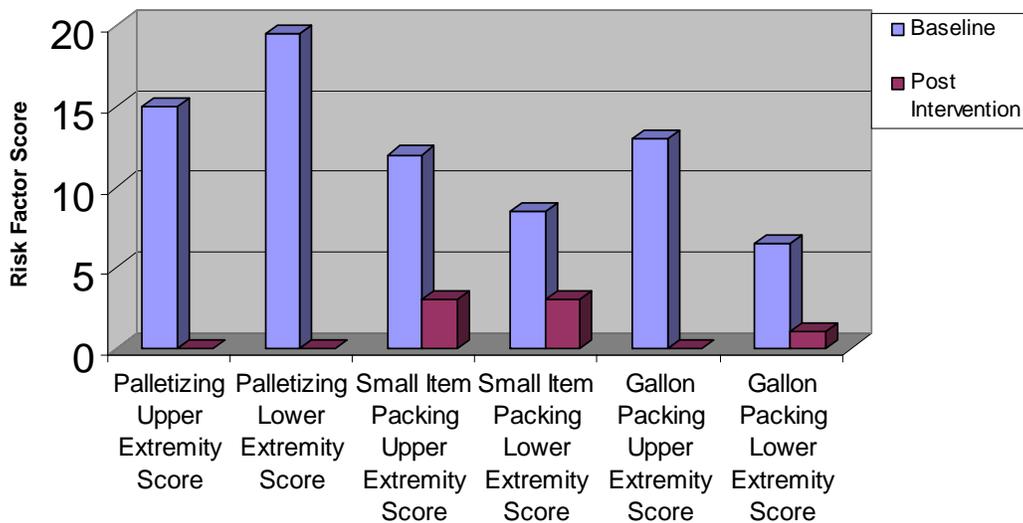
Results:



- A tremendous decrease in Restricted Days Rate (standardized per 200,000 hours worked) was observed. This decrease equated to a 95% improvement.



- CTD Rate decreased 72%, from 25 to 7 incidents per 200,000 hours worked over the 24 months following the intervention.
- Lost Days rate improved 100% for 2 years following the intervention. The rate was 44 per 200,000 hours worked for the 12 months prior.
- There was an increase noted in the Employee Turnover rate, but is unknown to be directly related to the implementation of the new equipment.



- As an average, risk factor scores decreased nearly 91% over 3 tasks pertaining to the intervention.