Examples of Good Ergonomics Practices at the United States Postal Service

Introduction
OSHA, the American Postal Workers Union (APWU), the National Postal Mail Handlers Union (NMHU) and the U.S. Postal Service (USPS) entered into an Ergonomic Strategic Partnership in 2003. The goal of the partnership is the reduction of musculoskeletal disorders (MSDs) through an ergonomic risk reduction process (ERRP). ERRP creates self-sustaining teams and imparts ergonomic identification and resolution skills to the employees of the Postal Service. The ERRP site core team combines the talents of management, labor unions, and individual craft employees to ensure that all employees have a safe and productive workplace.

Demonstrated Results
By bringing management, unions and employees together to cooperatively identify potential hazards and ergonomic health risks, the Postal Service, through this partnership, is transforming their workplace safety and health ergonomic program into a model for both the public and private sector.

- ERRP sites in the process for the full three years have experienced the most dramatic results
  - a 38% reduction in the MSD Recordable rate
  - a 40% reduction in Handling & Lifting rate
- ERRP sites are experiencing greater success than non-ERRP sites:
  - MSD rates are 35% less in ERRP sites
  - Handling & Lifting rates are 18% less in ERRP sites
- A $1.8 million savings in workers' compensation medical costs (a 39% reduction)
- More than 77,000 employees have been trained
- Nearly 7,000 ergonomic task analyses have been conducted and 3,600 fixes have been implemented

Other benefits of the process include:

- Supervisors and craft working together to resolve problems
- Better trained workforce and development of individual responsibility for job improvements
- Improved communication and organizational skills of the ERRP team members
- Follow-up on employee suggestions
- USPS, Labor and OSHA resolving issues as partners for better employee health
- Management and union leadership working together
- ERRP teams provide input on equipment layout
- Better morale and evidence that the Postal Service cares about its employees
- Improved mail flow
- Low cost improvements

Overview of the US Postal Service
The USPS has more than 700,000 employees, making it the second largest employer in America (4th largest in the world) and ranks 11th among revenue producers in America (27th in the world).

The USPS has 675 mail processing facilities and more than 38,000 retail sites. USPS transports and delivers more than 206 billion pieces of mail per year, with delivery to 141 million addresses six days per week. Two million addresses are added annually, which is nearly the number of addresses in San Diego, California. The Postal Service is not subsidized by federal, state or local governments. It is an entirely self-sustaining federal agency.

Ergonomic Risk Reduction Process – Background
The Ergonomic Risk Reduction Process (ERRP) was tested using the Albany, New York Processing and Distribution Center in March 2001 as a pilot site. The preliminary results from the Albany pilot showed the ergonomics risk reduction model could reduce musculoskeletal disorders and workers' compensation costs when USPS labor, management and OSHA work as a "TEAM" to reduce and/or eliminate potential risk factors. The OSHA area director provided guidance and attended several of the Joint Labor Management Safety and Health committee meetings.

Once the ERRP is initiated, the USPS embeds a full-time ergonomist at the site to train the site coordinator from kickoff through implementation (60 – 90 days). The ergonomist conveys ergonomic process knowledge to the Core Team or ERRP city/territory teams, as well as USPS and union leadership through training and hands-on job analysis. The agronomist performs evaluations for the verification of abilities necessary to continue the process, demonstrating the ERRP site's or district's capacity to be self-sustaining.

Summary of the Job Improvement steps

1. MSD analysis to identify jobs with high rates of MSD;
2. Review of the job safety analysis and standard operating procedures
3. Describe jobs by observing and interviewing employees and supervisors
4. Breakdown jobs into tasks and steps
5. Link ergonomic risk factors to steps
   Forceful exertions, awkward and static postures, repetitive motions, contact stress, environmental (vibration, cold temperatures, lighting)
6. Describe the risk and root cause
7. Brainstorm alternatives to apply a principle of ergonomics to eliminate or reduce the ergonomic risk.
   Examples: neutral postures, reduce force, keep objects within an easy reach, keep objects at elbow height or within knees to shoulders, reduce repetitive motions, avoid static postures, avoid pressure points, provide adequate clearance, reduce vibration, control the temperature and lighting
8. Develop an implementation plan
9. Obtain feedback on days 1 and 30 after implementation
10. Record the cost to implement

The Site Core Team

The heart of ERRP is the site core team which reports to the Joint Labor Management Safety and Health Committee. The core team has representatives from each union and management for each shift (tour). The teams have a 1-4 hour workshop once a week. Activities of the site core team include:

- Job analysis
- Tracking the implementation of controls and removing barriers
- Training
- Service talks with employees
- Presentations to management
- Developing communication ideas

The ERRP has been successful because it is a systematic process with clearly defined goals. MSD data is critical for identifying projects and measuring success. With data and clearly defined goals the four partners can work on ERRP with a steadfast focus.

Major building blocks for the process are employee participation and leadership from plant management and the union leaders. Employee participation creates credibility, respect and trust not only for the process, but in the workplace. As in any effective safety and health management system, top management commitment is crucial to the success of the ERRP process.

To be successful in a large organization, such as the USPS, the ergonomics process must stay focused on a narrow path with two goals; the identification of ergonomic risk factors, and the elimination or reduction of those risks.

The vision of the Ergonomic Risk Reduction Process is as follows:

> "Postal employees will be able to do their job without pain and enjoy their retirement without physical restriction."

The examples of solutions in this material are the product of the USPS Ergonomic Risk Reduction Process teams across the nation. Working with employees, plant and union leadership and safety and health committees, the ERRP teams have identified opportunities to reduce musculoskeletal disorders (MSDs) at their facility and they have implemented solutions to eliminate or reduce the risk factors that contribute to MSDs. These solutions were selected from hundreds of implementations because the tasks are common to many mail processing facilities and the solutions have general applicability. To reduce risk factors the solution must be appropriate for the task and used by the people performing the task. A successful implementation is more than the control, training (employees, supervisors, and maintenance), testing, and periodic feedback are also needed.

Task Intervention # 1
Work Location - Mail Prep
Task – Mail handlers remove bundled flats (2 C & Standard) from hampers to prep into Flat Mail Carts for the AFSM 100 flats processing operation.
Opportunity to reduce risk - Reaching to the bottom of hampers to unload mail resulted in frequent bending, extended reaching, and forceful lifting from below knee height.
Solution – Provide a container tilter and service talk on the use of hamper tilters and updated the JSA. Less than $5,000

Before – Bending and reaching into a hamper to retrieve a bundle of mail

After – Container tilter lifts and tilts the hamper resulting in less bending and reaching

Task Intervention # 2
Work Location – Maintenance on automation equipment
Task - Maintenance employee working on automated machines such as the AFCS, DBCS, OCR, BCS, SPBM, MPFSM, AFSM, LMLM, etc. vacuum the equipment to remove dust and debris.
Opportunity to reduce risk - Positioning the vacuuming nozzle results in prolonged gripping in awkward wrist and shoulder position
Solution – Use a swivel nozzle and flexible hose attachment to keep the wrist straight and elbow in close to the body. Less than $100

Before – Straight nozzle on the vacuum hose results in awkward wrist and shoulder position to vacuum equipment

After – Flexible nozzle allows operator to vacuum equipment with a straight wrist

Task Intervention # 3
Work Location - Dock/platform
Task - Raising dock plates requires pulling a chain in the dock plate.
Opportunity to reduce risk – Pulling the chain results in forceful exertion while bending to the floor.
Solution – Provide a tool to pick up the chain that can be pulled while standing. Less than $100.

Before – Reaching to the floor to pull a chain that activates the dock leveler

After – Use of a tool allows the dock leveler to be positioned while standing

Task Intervention # 4
Work Location – Loading trays and tubs
Task – Lifting trays and tubs from pallets on the floor
Opportunity to reduce risk – Lifting trays or tubs of mail from a pallet results in frequent bending and forceful lifting from below knee height.
Solution – Provide a pallet lifter to elevate trays to waist level. Less than $5000

Before – Frequent bending to lift trays of mail from a pallet on the floor

After – Pallet lift allows the person to raise the trays to waist height

Task Intervention # 5
Work Location - Culling mail in cancellation
Task - Pulling oversized letters, parcels and flats from the culling belt on the canceling machine.
Opportunity to reduce risk - Work surface is too high for shorter employees, resulting in awkward shoulder position.
Solution - Provide an adjustable and removable platform. Less than $200.

Before – Height of the conveyor results in working above elbow height

After - Use of a portable platform allows work to be performed at elbow height. Platform has a yellow border to improve visibility and is portable so it can be easily removed

Task Intervention # 6
Work Location - Delivery Barcode Sorter (DBCS)
Task - Sweeping letters from the DBCS bins and placing them in trays
Opportunity to reduce risk – Heavy volume mail is sorted to a bin on the bottom level resulting in frequent bending.
Solution – Reprogram the sort plan to allow heavy volume mail to be sorted into bins at the middle level. Rotate between sweeping and feeding the DBCS. Less than $500

Before – Heavy mail volume falls to the bottom bin resulting in frequent bending and twisting while removing the mail from the machine

After – Moving heavy volume mail to the middle bin results in less bending

Task Intervention # 7
Work Location – Flats mail processing equipment
Task – Tubs of mail are stacked in carts, then unloaded from the cart at the flats processing equipment.
Opportunity to reduce risk – Tubs are stacked above shoulder height resulting in forceful lifting with the hands above the head.
Solution – Supervisors should ensure employees follow safety guidelines and not fill containers above the ¾ capacity mark on the containers.

Before – Overloading containers results in forceful lifting above the head

After – Containers filled to ¾ full reduces lifting above head height

Task Intervention # 8
Work Location – Dock/platform
Task – Pull the 5th wheel release pin on a trailer
Opportunity to reduce risk – The handle to release the 5th wheel is under the trailer resulting in forceful pulling with a long reach and bent back
Solution – Provide a tool that allows the handle to be pulled without reaching under the trailer. Less than $100.

Before - Reaching under the trailer to pull the 5th wheel release

After - Using a tool to pull the 5th wheel release

Task Intervention # 9
Work Location – Small Parcel Bundle Sorter (SPBS)
Task – Removing reject mail from the waterfall
Opportunity to reduce risk – Mail from the waterfall falls on the floor resulting in prolonged bending or squatting
Solution – Place a cart at the waterfall to catch the mail. Less than $300.

Before - Pulling mail out of the waterfall with a rake

After - Cart at the waterfall to collect mail

Task Intervention # 10
Work Location – Dumper or sweeping flat/parcels
Task – Stacking and unstacking empty hampers, or wire containers
Opportunity to reduce risk – Stacking empty hampers or wire container to save floor space or shipping cost results in forceful lifting and pushing above head height.
Solution – Provide a hamper (and wire container) stacker. Less than $12,000.

Before - Two people lifting a third hamper onto a stack

After - One person rolling a hamper into the stacker with two hampers already stacked.