

Case Study

8096

Intervention key words

Firefighter equipment

Industry

Health care, service

Risk factors

Manual handling – pushing/pulling; manual handling – lifting/carrying; awkward posture – back deviations; awkward posture – shoulder deviations.

Situation

This fire department was equipped with 32-year-old hydraulic tools as shown in the photo on the left. These tools are large and heavy. They require at least two firefighters to carry and to effectively operate in addition to the impacts below.

- There was a high level of rapid fatigue and strain on the user's back and upper body.
- The heavy weight of the equipment slowed down the speed of the helping process;
- The hydraulic hose line was susceptible to bursting under pressure.
- The cost of injuries and near-misses reached approximately \$103,920 per a year.



Solution

This employer spent \$21,616 to purchase new, easier-to-use tools. These tools as shown in the photo on the right are 80-percent lighter than the old tools and smaller in size.



Results

- The incident rate (standardized for each 200,000 hours worked) decreased from 2.56 the two years prior to the intervention to zero the two years following, a 100-percent improvement.
- The time it takes to perform extrication from a crashed motor vehicle was reduced by 75 percent. This means the victim will receive treatment three times faster than when using the previous equipment.
- A single firefighter can unload, carry and utilize the tools. This helps the firefighters to move faster during the crash.
- Using the new tools reduces the level of rapid fatigue caused by the tools themselves.
- The National Safety Council reports the average cost for a workers' compensation claim is \$19,382. This employer's return on investment was 2.2 years.