

## **Continuous Safety Improvement-A Successful Case Study**

**Anthony R. SCHIAVI, P.E., C.S.P., A.R.M.  
Director, Safety and Environmental Affairs  
Boston Globe  
Boston, Massachusetts**

The Boston Globe is a major metropolitan newspaper that is a subsidiary of the New York Times. The Boston Globe has been in business since 1872. Over the years the Globe has made improvements in new presses, mailroom and direct to plate technology. The Globe has two major printing plants each having four presses. We have over 2,000 employees with 12 unions. The foremen are also in the union although they are considered management. The safety department at its hiatus was four employees and now down to one. This is a case study that takes you through the efforts of the Globe in reducing its worker's compensation exposure by managing safety in a number of areas. Through the initiatives and programs that follow has resulted in a reduction of over 65% in total accidents and a 75% reduction in lost time accidents over a six year period. Our musculoskeletal stress injuries were reduced by over 75% in three years. This represented a savings of over 3 million dollars in direct costs and another estimated 6 million in indirect costs per year. In these times of hard economic forces affecting newspapers, this is an opportunity to use the savings in other areas of the organization.

We will start by talking about our past failures and missed opportunities. Over a number of years, the Globe took the traditional approach of safety compliance with training. We had no accountability for safety at a local departmental level. Foremen were production and quality focused with safety in the background. We had limited successes with no sustained effort and at times peaking in worker's compensation costs and accidents.

In 2001, we made partner with Dupont Safety Services to benchmark the Globe against world class safety companies in twelve specific elements. These elements were visible management commitment, working safety policy, integrated organization for safety, line organization responsibility and accountability, aggressive safety goals and objectives, high standards of performance, supportive safety personnel, progressive motivation, comprehensive injury and incident investigation and reports, effective two way communication, continuous safety training and safety auditing. Each element had five level categories increasing in effectiveness namely: fundamental, awareness, skills, excellence and world class. The results were no surprise to anyone, the organization was rated at a fundamental level in most elements and in some elements we were below that basic level.

We made a decision to address three areas: management commitment, accident investigation and safety auditing.

## **Management Accountability**

We concentrated on two levels of management accountability namely senior executive managers and the foremen and superintendents. Senior managers had 25% of their raise and bonus directly affected by a lagging indicator which was a reduction of lost time accidents and lost work days by 20% over the previous year. We used this cost driver since it has the most impact on the worker's compensation costs. This level included all the VP's etc in the organization. The foremen had a leading indicator as their goal, conducting four safety audits per month with two being observational. Also, the foremen's raise and bonus was affected by 25%. The plant managers run the safety meetings at the plants. Foremen are responsible for accident investigations and following up on improvements after the safety audits. Executive quarterly committee was organized to address on going safety efforts and bumps in the road.

Monthly all foremen and executives receive safety performance charts and a weekly list of all employees receiving worker's compensation indemnity payments.

## **Accident Investigation**

All supervisors are required to complete the accident investigation form as part of completing the incident report. In addition, all supervisors were trained in a half day class. The accident investigation report is enclosed at the end of this document. The incident investigation report covers contributing factors from employees, environment and equipment. The MSD injuries cover details as far as job tasks, load and position which allows the investigator to analyze the incident. The corrective action and the follow-up are part of the report.

## **Safety Auditing**

We trained all foremen in a safety auditing class with behavioral aspects. They were trained in coaching and trying to change behavior. The process involved both the negative aspects of approaching employees who are conducting unsafe acts and the positive of thanking employees who are taking the time to do the right tasks safely. This coaching reinforces good behavior while trying to get acceptance on changing poor safety behavior. We have not taken this to the next level of discipline as far as safety is concerned. The progression of training to termination is discussed in the chart at the end of this document.

We developed a one page Lotus notes database to complete the form and send it to the supervisor and then safety. We generally conduct about 2400 safety audits each year so each foreman does 4 audits per month with 50% being observational. The form covers personal protective equipment, position of employees, ergonomics, tools, machinery and equipment, operating procedures and housekeeping. The area audited, observations, recommendations are included.

## Raising/Maintaining Standards

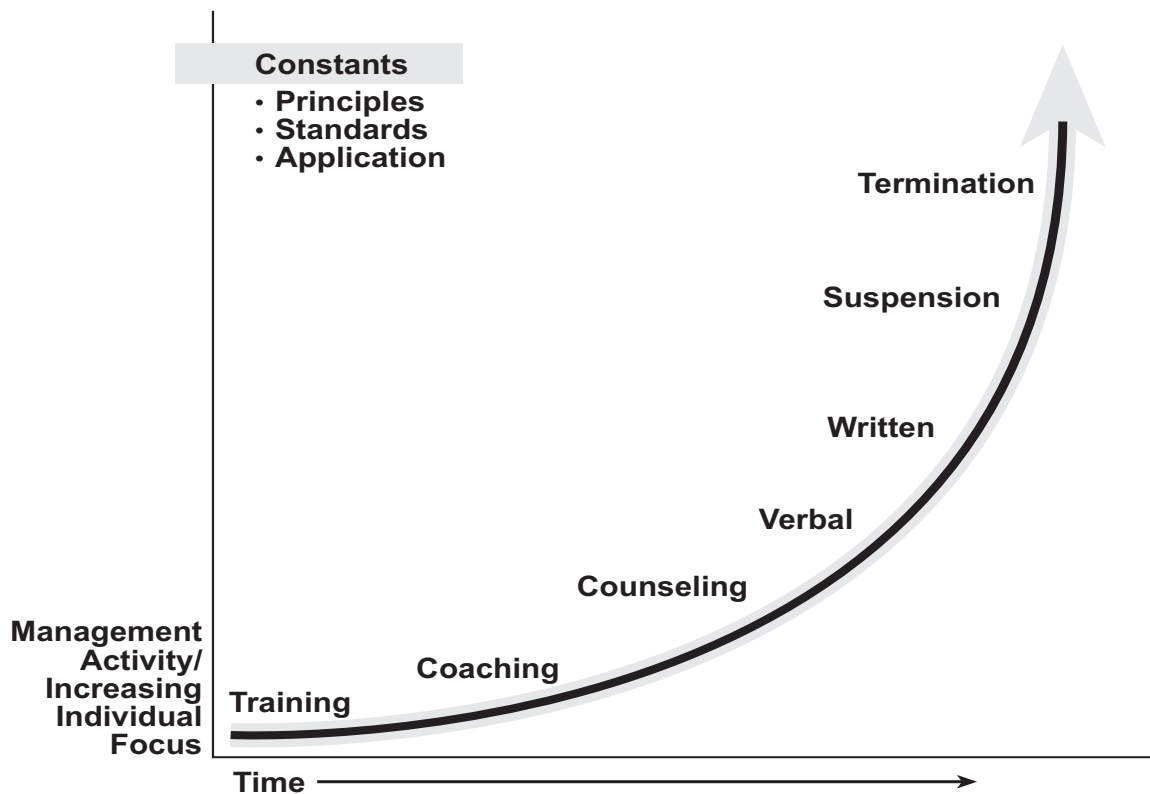


Exhibit 1.

## Humantech Ergonomics

We partnered with Humantech for ergonomics in our manufacturing area covering mailroom, pressroom and delivery. All major job tasks were analyzed and we decided to address the top 10 high hazard jobs. We developed a detailed analysis of these jobs using the Brief and Best scoring tools. The unions were engaged in the process and ergonomic improvements were recommended. The chart on the next page demonstrates the process of how our ergonomics program works.



**Exhibit 2. Ergonomics Process.**

The majority of improvements were minor fixes as follows:

Pressroom

1. Wheeled carts to deliver chemicals to work areas.
2. Kneeling pads and knee pads
3. Steps and hand holds for access to press areas
4. Additional lights for limited lighted areas
5. Gel pads for shoes
6. Power tools in lieu of hand wrenches

Mailroom

1. EZ lift and turntable lift tables
2. Access steps for equipment
3. Ergo mats at stations
4. Gel pads for shoes

Delivery

1. Hand holds for trucks
2. Lights in rear areas
3. Work tables inside vehicles
4. Air ride seats
5. Holes in wheel wells to drain water

## Safe Operating Procedures

We developed safe operating procedures and guidelines for each department. This allows the foramen to have a document that gives him/her the tools to monitor the work place as far as safety. This is as simple as a one or two page document.

### Safe Operating Procedures

#### Delivery

The following are safe operating procedures for the delivery area:

1. Wear safety shoes
2. Wear seat belts when driving vehicles.
3. Use three point contact when entering and exiting trucks
4. Do not jump off trucks or docks
5. No horseplay or excessive speed when operating forklifts and pallet jacks.
6. Wear seat belts when operating forklifts.
7. Use telescoping conveyor to load truck front to rear.
8. No throwing of bundles.
9. Do not carry more than two bundles except if using a dolly.
10. When entering vehicles with forklifts and pallet jacks, use chocks on wheels of vehicles.
11. Use personal protective equipment when changing propane tanks (gloves and face shield).
12. Use stop button on conveyor prior to clearing jams.
13. Trucks need to be parked square to dock to minimize gaps at platforms.
14. Use safe lifting techniques:
  - Bend your knees
  - Keep load as close to the body as possible
  - Turn your body with your feet. **No Twisting**

#### Exhibit 3.

## Post accident Programs

It is just as important to manage a worker's compensation incident after the incident has been filed especially if the incident involves lost time. In addition, to the accident investigation addressing pro-actively any safety and training concerns that may arise after the incident, we use the incident report to check on any red flags. This is based on repeaters, subjective injuries and accidents after vacation or days off. This will assist a company to weed out the real from the feign injuries.

The scheduling of surveillance and impartial examinations by third party doctors are important tasks that need to be part of a safety program. In 2007, we terminated five employees involved in

some type of fraud in the worker's compensation claim. Fraud covers three areas: feigned injury-no injury, real injury not work related and malingering on a lost time injury before returning to work.

Transitional duty program for up to 26 weeks in various departments reduces company costs and maintains employee contact prior to returning to full duty. This is a more difficult issue to manage in a union environment with jurisdictional and contractual issues.

We have a lost time intervention team that meets to discuss claims and safety initiatives on a weekly basis. The team is comprised of key individuals from the major departments, employee relations and finance. On a monthly basis, we meet with individual departments to discuss safety and claims strategies.

## **Administrative Controls**

In an effort to streamline the safety and worker's compensation areas, we needed to address a number of administrative controls that may or may not exist at your company.

We revised our incident report and accident investigation forms to make it more functional and clearer for the foremen. As far as monthly reports, we share a number of leading and lagging indicator reports: lost time accidents, total accidents, lost work days, worker's compensation costs, safety audits and paid worker's compensation list. The reports are distributed to all executives and supervisors. We attempt to engage all levels of the organization from a management level.

We instituted a drug and alcohol post incident program with two strikes and you're out of the company.

We worked with our medical department to modify the role of our medical staff as far as safety and worker's compensation.

## **Conclusions and Future Initiatives**

The results speak for themselves in reducing our total accidents over a six year period by 65%. Lost time accidents were reduced by 75%. MSD's reduced by 75% over a three year period. This translates into a direct savings of over 3 million dollars in worker's compensation costs. Now that much of the low hanging fruit has been picked, we need to move ahead with internet based training, tool box safety talks and some specialized training in 2008.

## ACCIDENT INVESTIGATION

### CONTRIBUTING FACTORS

Yes No N/A

<b>EQUIPMENT</b>	1.1	In your opinion, did any defect(s) in equipment contribute to hazardous conditions? If so, what?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMMENTS:
	1.2	Was the correct equipment readily available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORRECTIVE ACTION:
	1.3	Was the correct equipment being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1.4	Was the equipment used properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>ENVIRONMENT</b>	2.1	Did the workstation design or work area contribute to the accident?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMMENTS:
	2.2	Was the area cluttered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2.3	Were other conditions a contributing factor? (Lighting, wet floor, noise, contaminants, chemicals, cleaners, temperature extreme, weather.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORRECTIVE ACTION:
	OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>EMPLOYEE</b>	3.1	Was the employee trained to do the job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMMENTS:
	3.2	Did the employee know how to perform the job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3.3	Did the employee follow proper procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CORRECTIVE ACTION:
	3.4	Were at-risk behaviors a factor in causing the accident? If so, what?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
OTHER:						

## FOR MUSCULOSKELETAL INJURIES

4. Was the employee **lifting** when injury occurred? ☐ Yes ☐ No **If "Yes", answer 4a – 4e.**
- 4a. What height was the employee lifting from? ☐ Floor ☐ Knee ☐ Waist ☐ Shoulder ☐ Above Head
- 4b. What height was the employee lifting to? ☐ Floor ☐ Knee ☐ Waist ☐ Shoulder ☐ Above Head
- 4c. Did the lift involve an extended reach? ☐ Yes ☐ No
- 4d. Was the employee twisting? ☐ Yes ☐ No
- 4e. Has the employee been trained on proper lifting techniques? ☐ Yes ☐ No

5. Was the employee **carrying** when injury occurred? ☐ Yes ☐ No **If "Yes", answer 5a – 5e.**

- 5a. What was the weight of the item(s)? \_\_\_\_\_
- 5b. What was the size of the item(s)? \_\_\_\_\_
- 5c. Was the employee's line of vision blocked or impaired? ☐ Yes ☐ No
- 5d. Did the employee's foot slip while carrying item(s)? ☐ Yes ☐ No
- 5e. How far did employee carry item(s)? \_\_\_\_\_

6. Did the employee's job tasks involve **repetitive motion**? ☐ Yes ☐ No **If "Yes", answer 6a – 6b.**

6a. Did the employee's pain develop suddenly ☐ or gradually ☐?

6b. When did the employee first notice the pain? \_\_\_\_\_

6c. If the employee has experienced this pain before, when and how often? \_\_\_\_\_

6d. What factors may have contributed to the injury (e.g., improper body posture, workstation setup, fatigue)? \_\_\_\_\_

COMMENTS: \_\_\_\_\_

CORRECTIVE ACTION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

FOREMEN'S

NAME \_\_\_\_\_

DATE INVESTIGATION  
COMPLETED: \_\_\_\_\_

*—For Safety Coordinator's Use Only—*

Is Accident Investigation completed satisfactorily? ☐ Yes ☐

No

Was corrective action completed? ☐ Yes ☐ By whom

No

Does further corrective action need to be taken? ☐ Yes ☐ Assigned to: \_\_\_\_\_

No

Target date for  
completion: \_\_\_\_\_

Safety Coordinator \_\_\_\_\_

Date \_\_\_\_\_