Lessons from DuPont – Culture, Cost, and People

Similar to the chemical industry in the 1970s, the health care industry received a safety wake-up in 1999. Health care can respond by adopting a beyond-compliance prevention mindset approach to ensure that safety is a fundamental line management responsibility throughout the organization.

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Why do we never have enough money and time to work on prevention of incidents, yet we always have plenty of money and time to do the aftermath investigation, or to pay the expensive bills for the treatment of an injury, or to pay the litigation costs and settlement fees? In looking at environmental costs, we do not need to clean up the waste if we do not create the waste in the first place.

And, if you already have a sharp focus on prevention, what keeps your organization "on its toes" and always improving its safety, health, and environmental performance? Is your organization's safety culture really that critical to its strong prevention mindset? What makes better business sense when human life and suffering are affected? Is it only a "pay me now versus pay me later" decision? If we can reduce human suffering and reduce pain, can we lower the overall cost even more?

There are similarities between safety in the chemical industry and safety in the health care industry. The chemical industry received its safety "wake-up call" in the 1960s and 1970s with the focus on environmental issues. The health care industry had its wake-up call in 1999 when the Institute of Medicine published its report, "To Err is Human."

The safety work in the chemical industry was accelerated with the OSHA (Occupational Safety and Health Administration) legislation in the 1970s and with the Bhopal tragedy in 1984. Much activity was spawned in these two decades and only the smart ones survived – some chemical companies do not exist today because they did not have strong safety and environmental performance. To maintain a strong business position through this fundamental market shift, many in the chemical industry moved from a "compliance-only" stance to a business strategy that is "beyond compliance." What might a "beyond-compliance" mindset look like for health care?

The health care industry has been very active in answering this question. There have been many meetings and test programs to address the industry's safety and security needs. While this is laudable, how does one begin to convince leaders in the health care industry to make the "prevention-based" investment and the needed culture change? How can one convince these leaders that a strategy of "compliance only" will be a losing strategy in the end? Is it possible to make a business case that if one's team is always behind, this team will ultimately fail? Is it true that external changes are coming too fast, and that institutions that are only making incremental change may not survive? Will the institutions who embrace truly bold strategies now become the leaders of the future? With many hospitals seeing financial losses, what will be necessary to accelerate the "prevention mindset" in the health care industry? We are already seeing beginnings of state and local legislation. What is next? The "prevention mindset" is akin to "beyond compliance" and can be directly connected to cultural change that comes from paying strict attention to safety and well being. The human elements of supporting and leading safety to "beyond compliance" gives health care leaders a critical tool to positively affect other issues like nursing shortages, infection management, and medication errors.

Experience has shown that an investment in safety prevention is money well spent. Investment in safety reduces ultimate costs – direct and indirect – and enhances employee and customer productivity. Strong safety performance has also equated to higher product quality. Informal estimates at DuPont and at other "safety-first" institutions indicate that for every dollar invested in safety, savings of $2.50 - $4.00 occur. Business would be in excellent shape today if all investments had a payback like this.

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Figure 1 Twelve Essential Elements of Safety

If the financial argument seems a bit shallow and cold-hearted, let us look at the elements of human suffering from one serious injury. There are over 5,000 on-the-job fatalities every year in the United States. The good news is that this number has been trending lower over the past decade. Serious injuries, while not a fatality, are more numerous and can be equally as devastating. Severe burns or lost limbs may equal lost earning power, permanent disability, families on welfare, and children with lost college dreams. The price to U.S. society alone is estimated to be billions of dollars. From a health care viewpoint, good safety is perhaps the ultimate demonstration of value for human life, especially in light of the IOM report that cites over 98,000 patient deaths annually in US hospitals due to errors in care.

Would there be fewer patient deaths if there were fewer injuries to nurses? Would there be fewer patient deaths if nurses could stop their work, without fear of recrimination, if they had a question? Would there be fewer patient deaths if there were better training and discipline around procedures? Would there be fewer patient deaths if health care leaders decided that their goal was zero for injuries and incidents in their institutions, and put work processes in place to achieve that goal?

Safety leadership and implementation are not for the faint of heart. Good safety needs to be modeled and good safety processes need to be closely managed. Twelve elements essential for a good safety effort are listed in Figure 1. These elements have been proven in work done by DuPont, one of the world's safest companies, over the past 200 years. In short, good safety practice takes committed leadership, educated personnel, integrated safety systems, and continuous attention to the details of the work. Are the current work processes and systems in health care integrated enough? Is the right data being collected? How engaged are the key leaders in "setting the tone at the top" for acceptable goals and results?

Safety performance either gets better or gets worse; it is never static. There is a false belief that "safety can be managed via indirect control and autopilot." While DuPont has one of the best safety records in the world, the corporation continually strives to improve its safety performance. DuPont safety implementation is far from perfect, and the organization invests daily to keep its own edge. This edge is kept in place by leadership, continuous training, and strong audit processes. Good safety is an elusive dynamic; when safety seems good, it is vulnerable. The key is to never become complacent. Similarly, health care leaders have known for a long time that complacency around procedures, laboratory housekeeping, and infection prevention and control measures can be bad for business.

Another misconception is that it is the "safety manager who manages safety." Nothing could be further from the truth for organizations that have strong safety performance. That safety manager is you, your CEO, and your other colleagues. Your safety manager is a consultant, your helper, and conscience about what are the right next steps. Safety is and must be a fundamental line management responsibility, all through the organization. Are you prepared to do this job? Most likely, you lack training. DuPont and other organizations with strong safety performance train their personnel continuously on what is needed and required. The training can be as short as a daily safety ...message to a program on how to run a failure mode and effect analysis (FMEA). Health care is adopting the FMEA risk assessment tool, which has been used for many years in the chemical and nuclear industries.

The role of senior leadership is critical to strong safety performance. At DuPont, safety culture starts at the top of the organization. Our CEO is actively engaged in leading safety. He starts his key meetings with safety, and he insists that safety come first on every manager's and every employee's list. He

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expects to be notified by his direct reports of each employee's lost time, injury, or fatality, employee or contractor, within 24 hours of the event. When someone loses a day of work due to injury at your institution, is a report sent within 24 hours to your CEO about what happened, why it happened, and what is being done to correct the situation? It is the role of senior leadership to set the tone, and this work, in a strong safety culture, is never delegated. What are your institutions' reporting procedures for patient deaths? For employee injuries? For near misses? Does your leadership regularly follow up with the folks affected?

At DuPont, any person can stop any job at any time if there is a perceived or real danger. Managers and employees are expected to work together to figure out how to do a job safely. If they need more resources, the team obtains them to resolve the problem. Management's role is to support the team, and to help find the safest, best solution. There are multiple audits to ensure compliance to standards. DuPont never stops looking for weaknesses in its safety systems. That is the equivalent to 79,000 pairs of eyes checking for voids and missed safety elements, every minute of every day. In health care, an equivalent situation may be a nurse refusing to lift a patient without assistance, or a pharmacist triple-checking for drug allergies before filling a prescription. Are your employees rewarded for stopping and asking questions if they feel uncomfortable? Do you track the near misses and use the data to improve your internal procedures?

Once an organization has achieved good safety, strong science continues to assist the improvement activities and the leaders. One of the "new" tools on the market in recent years is Six Sigma. When one starts to use the rigor of Six Sigma to approach today's safety issues, the "critical few" items that will have an impact on results are quickly separated from "the many," that while still important, are not as urgent to address. Both the chemical and the health care industries are using Six Sigma tools to improve quality; however, it is also used to improve prioritization, risk management, and decision-making.

Good safety comes not only in "culture" and work processes, good safety can be engineered into products, machines, and the environment of care. Companies like DuPont work safety into their purchases, their product designs, their equipment needs, and the service delivery of their contractors. For example, contractors on DuPont locations are required to follow identical safety procedures as DuPont employees. The contractor organizations are accountable for putting these procedures into place or they do not do the work. DuPont saves more then $21 million every year because of the contractual safety and insurance requirements it places on its construction contractors. These savings are on a base of around 12,000 construction contractors. Many health care institutions in the United States are building new wings or are remodeling existing facilities. Are your contractors taking advantage of these safety techniques to save on your costs?

Current Thinking	Leading-Edge Thinking
All injuries are unavoidable.	All injuries and incidents are preventable.
Major injuries are investigated.	All incidents are investigated/acted upon.
Safety expert is accountable.	Line organization is accountable.
Equipment/procedural failures cause injuries.	Actions of people cause injuries.
"Off job" safety is a personal matter.	"Off job" safety is equivalent to "on job" safety.
Contractors have separate safety standards.	Employee and contractor safety is the same.

Figure 2 "Game-Changing" Thinking for Safety in Health Care

Figure 2 outlines some "game-changing" thoughts that apply to both the chemical and the health care industry. As you can see from the list, some change would be required in the way some institutions are managed today. What would a health care environment look like if the hospital CEO set a goal of zero for all employee injuries? Would lower employee injuries reduce nurse attrition? Would a hospital attract more business in a given community because it was "safer" than its competition, and could prove it? Do we work at incremental change of status quo because the tasks are too many, too daunting, and the fix is perceived to be too expensive? What is the quality of our leadership in this area? What can you start doing today to bring some of this thinking into your place of work?

You may ask, "Can I afford it?"

One may say, "You really cannot afford not to."■