



Out of Industry Lessons on Reliable Safety Culture



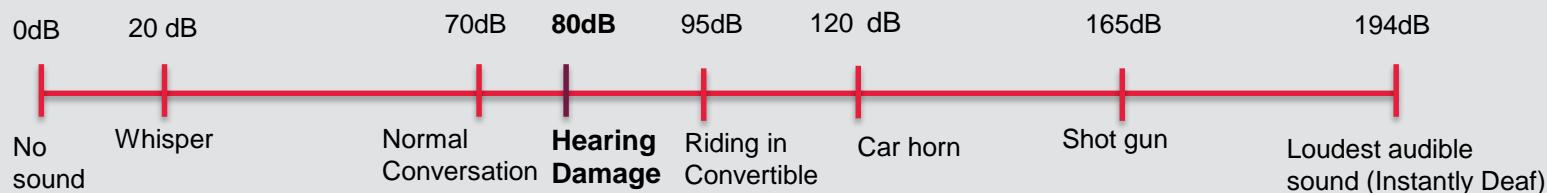
- | March 21, 2017
- | Deborah L. Grubbe, P.E., F.AIChE, NAC, DuPont
- | 11th Annual Pennsylvania Hospital/Physicians Collaborative Conference

What We Will Discuss

- Safety Moment
- Key Thought
- Very Brief DuPont Safety History
- Concepts of Integrated Safety and Safety Culture
- Out of Industry Lessons in High Reliability
- Summary and Discussion

Safety Moment: Protecting Your Ears

A hazard that is 100% preventable



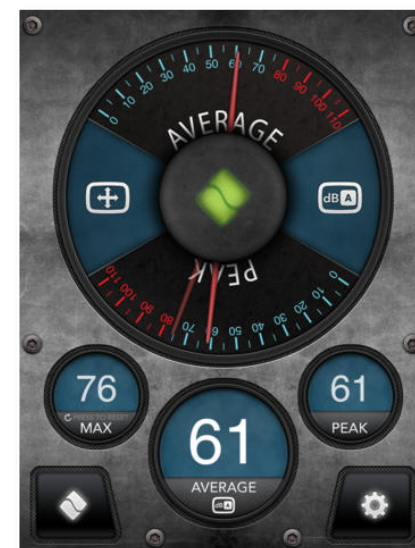
**30 million
Americans exposed
&
10 million
permanently
damaged**



Two components of hearing loss:

1. Intensity
2. Duration

Decibel meter Smartphone Apps



Staff Safety Focus Supports Patient Safety Results

- Hospital in Indiana moved to top 5% in quality outcomes due to focus on staff safety and leadership culture
- Wisconsin hospital uses staff safety observation to accelerate their “lean” work bearing successful overall outcomes
- Large hospital chain reduced worker compensation claims cost by tens of millions, and saw number of claims drop by 20-30% within the first 18 months; patient safety outcomes also improved
- In all hospitals, worker safety provided an additional way for management to address quality and patient experience

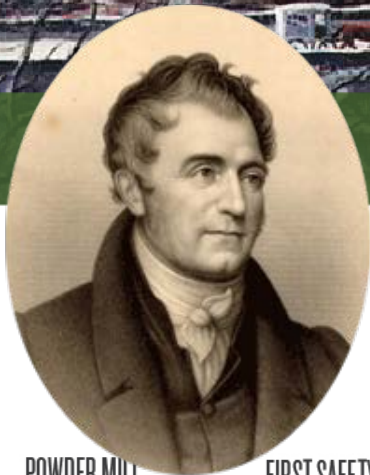
DuPont Safety History





DuPont Safety Culture – History

Safety is part of our DNA



Safety is a line management responsibility. ... No employee may enter a new or rebuilt mill until a member of top management has personally operated it.”
– E. I. du Pont

DuPont Safety Beliefs

- All injuries are preventable
- Zero injury is possible
- Management is accountable for safety
- Everyone is responsible for safety
- Off the job safety is essential for good results
- People must be trained in safety
- Good communications are essential
- Paying attention to safety requires “Leadership”

DuPont's 12 Elements of Safety Management



Integrated Safety and Safety Culture



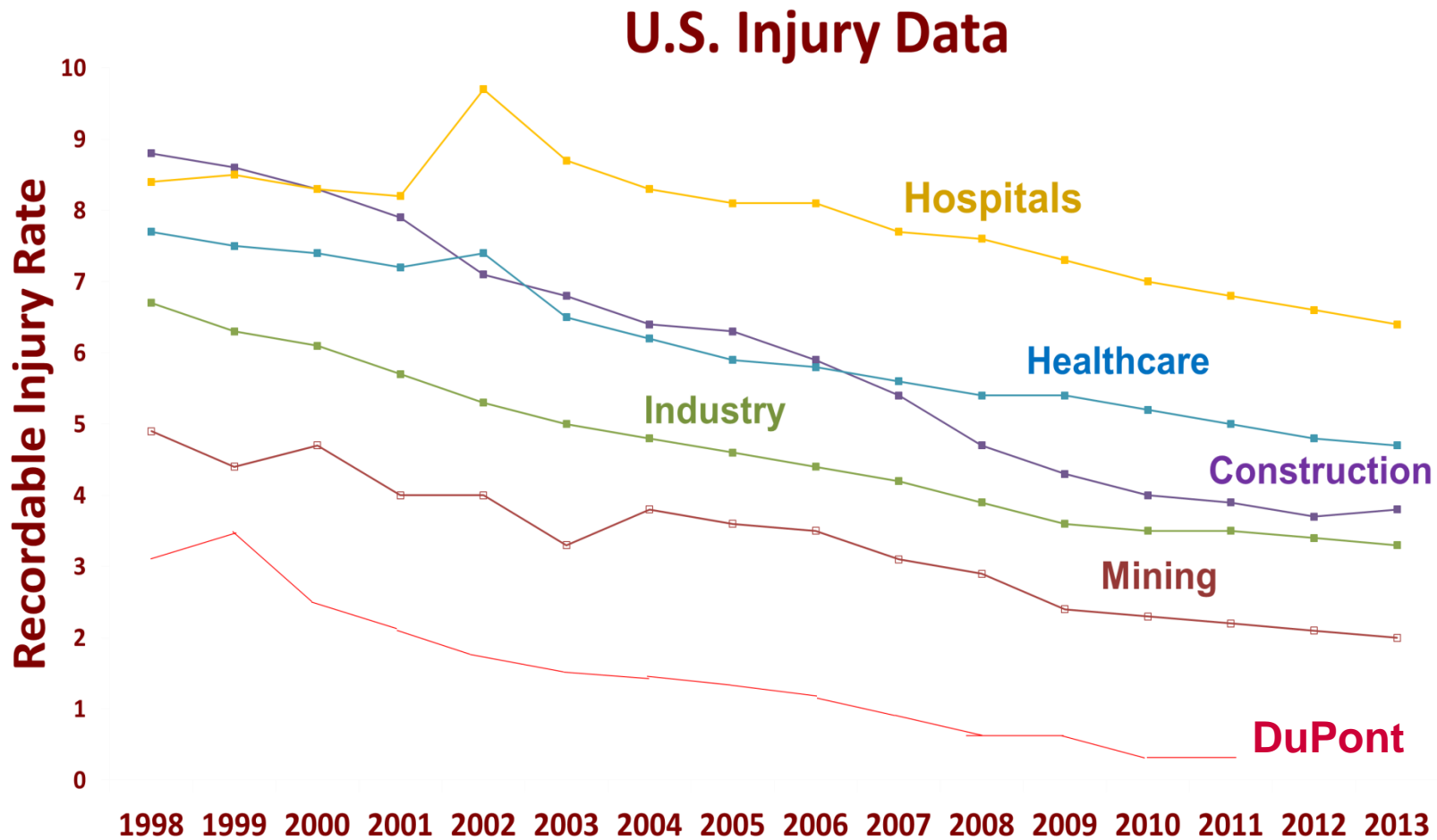
Why worry about safety?

There are two ends to the safety “see-saw”.....

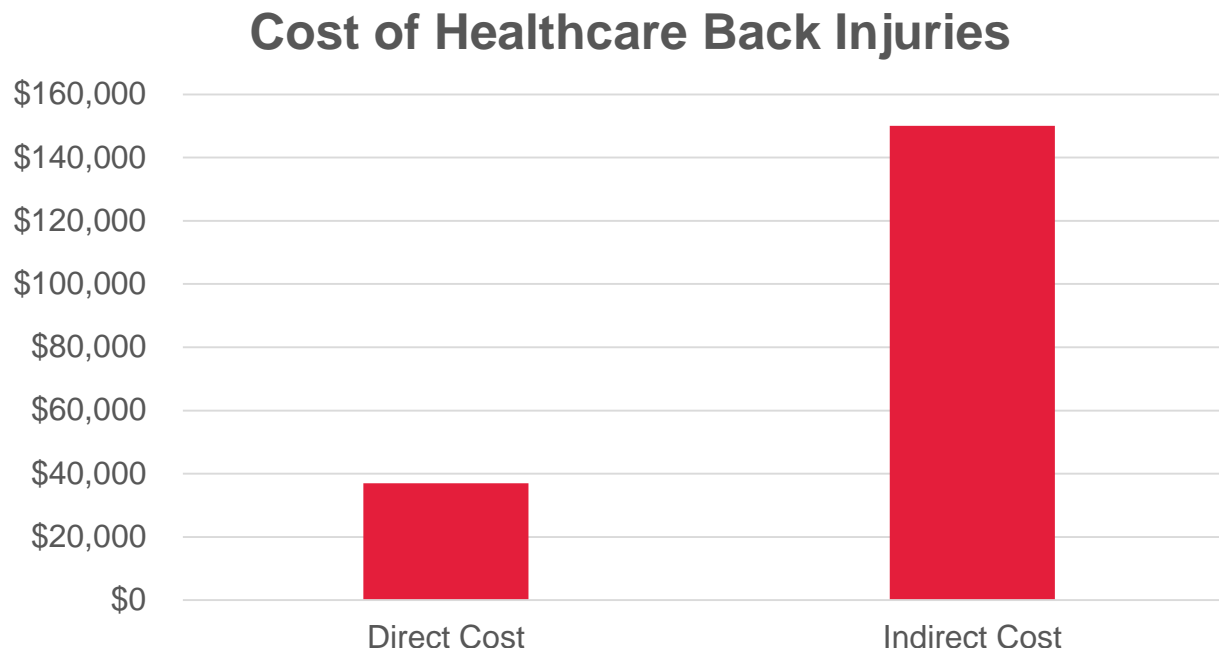


Not really important which end you climb on,
only important that you have the will to engage.

Bureau of Labor Statistics Safety Data



Back Injuries among the most impactful



A total of 626,000 lost workdays due to musculoskeletal disorders (MSDs) are reported to the Bureau of Labor Statistics, accounting for \$1 of every \$3 spent for workers' compensation

Source - "AORN's Position Statement on Workplace Safety" & US Bureau of Labor Statistics

Did you know.....?



If hospital X has
2,350
employees



The average number
of reported injuries
per 100 employees is **6.4**



\$15,860 The average direct costs of one
injury to a hospital employee

\$2,380,269 possible cost per year



43 nurses



235 new beds



469 IV pumps



211 Bladder
scan u/s



938 pulse oximetry
v/s machines

*Indirect costs are typically 2x the direct costs and can be up to 4x the direct costs

How Does Staff Safety Tie to Patient Safety?

- Caregivers and physicians need to feel “safe” in their environment in order to do their best work (emotionally and physically)
- Every mind needs to be totally focused on the patient, and not be worried about anything but care
- There are many different types of safety; however, they are ALL related and MUST be integrated
- Nurses and doctors should **NEVER** have to sacrifice their own health and well-being for excellent patient outcomes
- Patient centered care requires cohesiveness between management and care staff

What is Safety Culture?

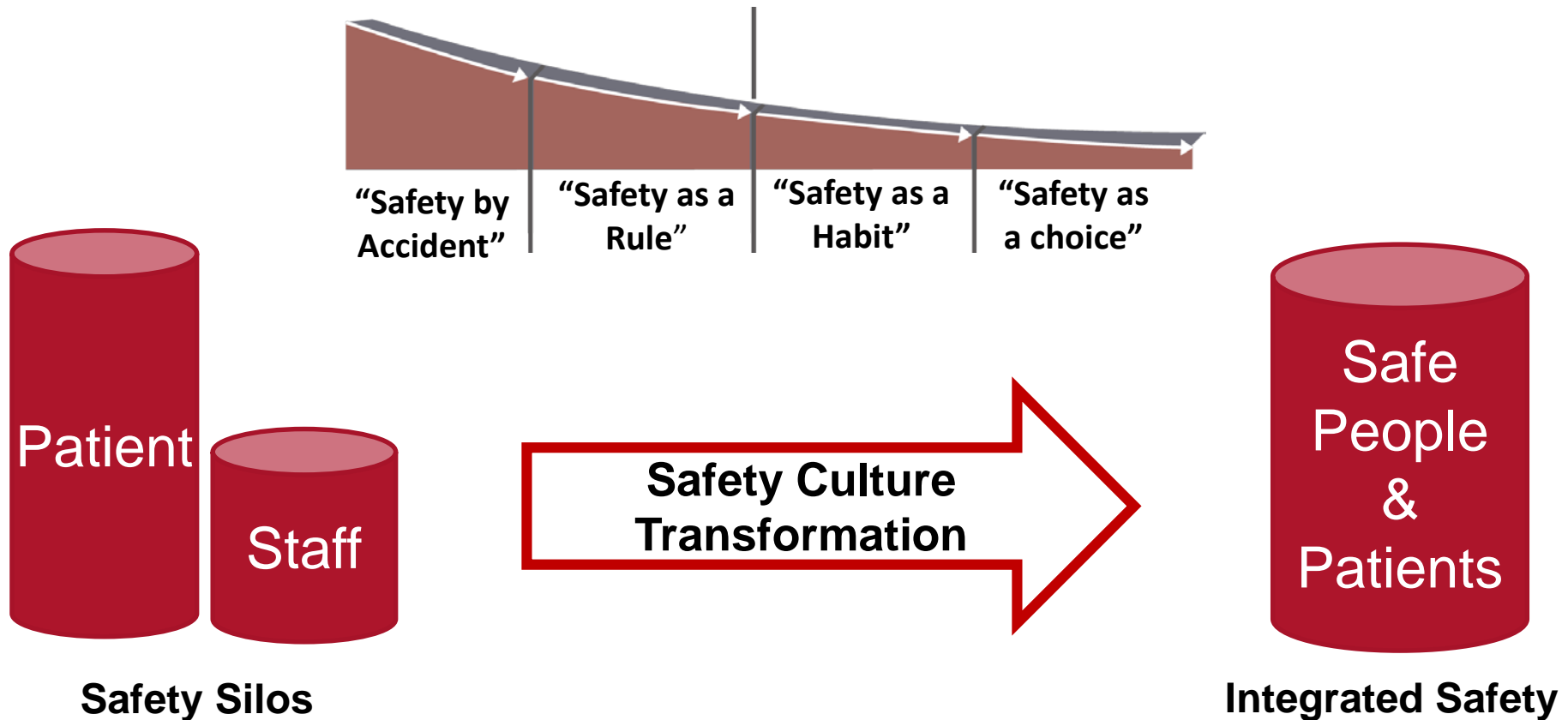
- “How we behave when no one is looking”
- Why do people take short cuts? – *Culture trumps procedures*
- What does a good culture look like? A bad one?
- How is management involved in culture? - *Totally accountable*

Culture “eats” strategy for Breakfast - ALWAYS!

Establishing YOUR Safety Climate



Building a Sustainable Safety Culture



Evolution of Safety Thinking & Culture

Current

Injuries are unavoidable

I take care of my safety

My hospital focuses on safety compliance

Safety is the job of the safety manager

We only investigate very serious incidents

We report per regulatory requirements only

Off the job safety is a personal matter

Improved

All injuries are preventable

WE take care of our safety

My hospital aspires to world class, holistic, safety performance

Safety is part of everyone's job description

We investigate all incidents and near misses

We report per more stringent healthcare system requirements

Off the job safety is equivalent to on the job safety

Safety Lessons in High Reliability



Characteristics of High Reliability Organizations

- Aware and conscious of the work process
- Addresses complexity; Reluctant to simplify
- Paranoid to failure; watches for “drift”
- Defers to expertise
- Resilient and relentless
- Requires “FELT Leadership”



What is Felt Leadership?

- Felt leadership is **demonstrating commitment and taking actions** for the well-being of people
- Felt leadership **involves** employees at all levels
- It is a **building block in generating trust** and developing relationships among employees, customers, shareholders and communities



Safety Culture

“In our view, the NASA organizational culture had as much to do with this accident as the foam.”

Columbia Accident Board Report, Volume 1, Page 97

Lessons Learned – NASA Challenger

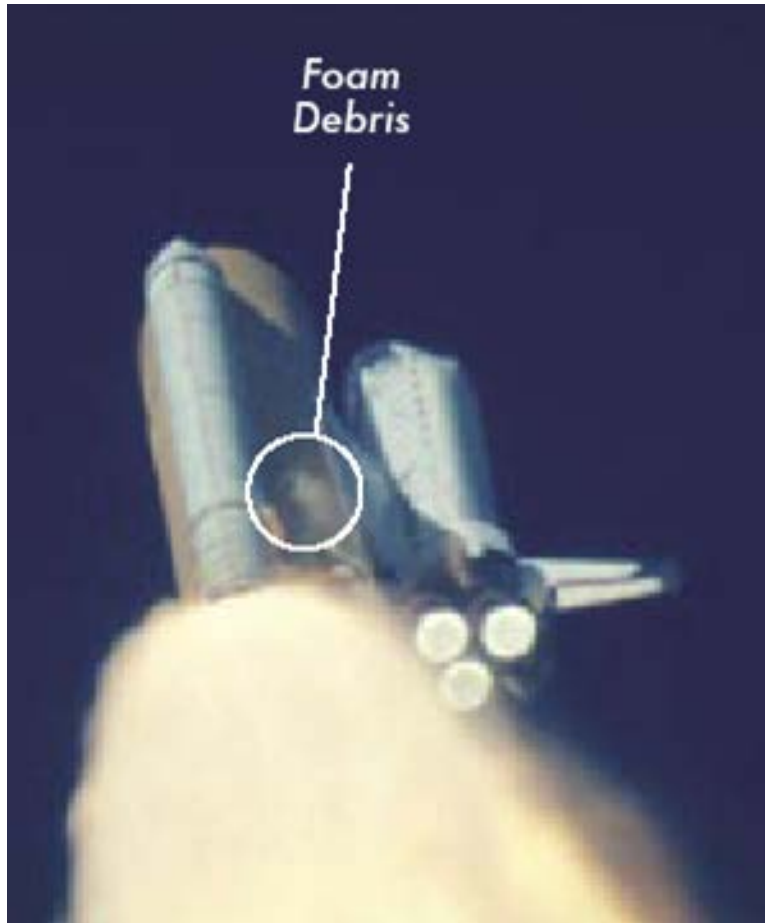
- Jan 28, 1986
- Behind schedule
- Cold and Ice
- Flawed decision process
- Jet stream above pad
- O-ring failed
- 7 dead



Rogers Commission Found

- NASA had **long known about** recurrent damage to o-rings
- Increasing levels of o-ring damage tolerated over time
 - Based upon rationale that **“nothing bad has happened yet”** (Drift)
- SRB experts had **expressed concerns** about the safety of the Challenger launch (*deferring to technical experts*)
- NASA’s culture **prevented these concerns from reaching top** decision-makers (*communication patterns, culture*)
- Past successes had **created an environment of over-confidence** within NASA (*complacency*)
- Extreme **pressures to maintain launch schedules** may have prompted flawed decision-making

Lessons Learned – NASA Columbia



- Launch + 16 days; Feb 3, 2003
- Foam @ 81 sec into flight
- Damaged RCC on wing edge
- Engineers asked 8x for pics
- Mission Mgr on vacation
- Shuttle disintegrated on entry
- 7 dead
- CAIB formed

CAIB Found

- NASA had long known about foam damage dangers; Levels of foam damage tolerated over time
 - Based upon rationale that *“nothing bad has happened yet”*
 - *Viewed as a turnaround issue, not as a flight safety issue*
- Engineers had **expressed concerns (8x)** about the safety of the Columbia launch (*deferring to technical experts*)
- NASA’s culture **prevented these concerns** from reaching top decision-makers (*communication patterns, culture, “B” team*)
- Past successes had created an **environment of over-confidence** within NASA (*complacency*)
- Leadership issues; “Tone at the Top”

Lessons Learned – BP Deepwater Horizon



April 20, 2010; 11 dead

Well blowout

Supervision inexperienced

Time/budget pressure to complete

Procedures not followed

Accountability issues

Management arrogance

Lack of safety learnings

Engineers on shore; lack of oversight

US Dept. of the Interior Found

- This well had “kicked” before; the rig crew knew it was a problem. In deeper water and deeper below the seabed than anything before.
 - No action taken due to time, budget and **“nothing bad has happened yet”**
- Both rig management and BP management staffed this rig with relatively new and inexperienced people (*deferring to technical experts*)
- BP’s culture **prevented the concerns** from reaching top decision-makers (*communication patterns, culture*)
- Past successes and management attitudes had created an **environment of over-confidence** within BP (*complacency*)
- Leadership issues- “Tone at the Top” - Leaders not paying much attention to safety; CEO was asked to step down.

Most Frequently Identified Root Causes of SE's reported to TJC- **LOOK FAMILIAR?**

SE	N = 936 (up to 2015)
Human factors (e.g. staff supervision)	999
Leadership (e.g. organizational planning)	849
Communication (e.g. with patients or leaders)	744
Assessment (including scope of the assessment)	545
Physical environment (e.g. fire safety)	202
HIT related (e.g. incompatibility)	125
Care planning (planning or interdisciplinary collaboration)	75
Operative care	62
Medication management (e.g. storage/control)	60
Information management (e.g. medical records)	52

Summary – Achieving Your Goals; Creating Your Legacy

- Proactive behavior towards safety at all levels
- Systemic issues are similar across organizations – learn from others, act and improve. Never quit. Never done.
- Remember always who we are serving – staff, patients, community.
- This is a marathon; not a sprint. Good leadership is essential.
- We **must** do the hard work – lives rest in the balance.

Question for your consideration:

“Could OUR patient safety progress be impacted because we are ignoring our culture?”

***“You will get
the level of
safety performance
that you
demonstrate
you are willing to
accept”***



Your questions?



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