

# The Challenger disaster teaches leaders to face the brutal facts of reality

By Stan Silverman – Contributing Writer, The Business Journals, Jan 23, 2018, 3:00am EST

Sunday, Jan. 28, marks the 32nd anniversary of the space shuttle Challenger disaster. On that date in 1986, the Challenger exploded 73 seconds after liftoff due to a leak in one of the O-rings of the solid rocket booster, resulting in the death of all seven crew members and the loss of the shuttle.

On this occasion, I would like to look back to an article I wrote two years ago, on the 30th anniversary of the Challenger disaster, that emphasizes the importance for all leaders of surrounding themselves with and listening to independent thinkers who will help them face the brutal facts of reality.

The engineers at Morton Thiokol, the contractor responsible for the design of the solid rocket boosters, were concerned about the cold temperature on launch day and the effect the cold would have on the solid rocket booster O-rings. The O-rings were designed to operate at an ambient temperature of not less than 40 degrees Fahrenheit.

On the day of the launch, the ambient temperature was 30 degrees. Concerned about the brittleness of the O-rings, Thiokol told NASA that the launch needed to be postponed.

NASA objected to the recommendation to delay the launch. The launch had already been delayed a number of times for various reasons. One NASA manager is quoted as saying, "I am appalled by your recommendation." Another NASA manager said, "My God, Thiokol, when do you want me to launch – next April?"

NASA made unrealistic launch frequency commitments to Congress to secure increased funding for the space program. Thiokol management, facing pressure from NASA, eventually acquiesced and agreed that the launch could proceed. The rest is history. The United States lost the Challenger and its crew due to the catastrophic failure of an O-ring.

On January 28, 2016, columnist Howard Berkes wrote an article for the NPR publication "The Two-Way" headlined "30 years after explosion, Challenger engineer still blames himself." For his article, Berkes interviewed Morton Thiokol engineer Robert Ebeling, who told the story of how he and four other engineers did not want the Challenger to be launched due to cold weather conditions. In spite of their concern, NASA launched the shuttle anyway.

Ebeling told Berkes, "I was one of the few that was really close to the situation. Had they listened to me and wait[ed] for a weather change, it might have been a completely different outcome. ... [NASA] had their mind set on going up and proving to the world they were right and they knew what they were doing. But they didn't."

For the remainder of his life, Ebeling blamed himself for not being able to convince NASA to delay the Challenger launch. I had the privilege of speaking with Ebeling shortly after the 30th anniversary of the Challenger disaster. I told him that he and the other Thiokol engineers who warned against the launch were American heroes. Ebeling passed away two weeks after my conversation with him.

Many times, a decision will come down to assessing the risks of various courses of action. When the possible result of a course of action is catastrophic even if the probability of it occurring is low, one should not take the risk. Unfortunately, the NASA decision makers who moved ahead with the Challenger launch did not think in these terms. They were more worried about their unrealistic launch schedule commitment to Congress.

Leaders need to create an environment and institutional culture that welcomes and encourages individuals to share their opinions. A courageous independent thinker should voice their opinion and try to convince everyone of the validity of the organization's reality. The views of the independent thinker may not be ultimately adopted, but at a minimum, those views provide a different path, a path against which the majority opinion can be tested and either confirmed or changed. Under this type of process, the best decisions will emerge.

In the words of renowned Brazilian novelist, Paulo Coelho, "If you want to be successful, you must respect one rule: Never lie to yourself." Leaders: Remember this when one of the independent thinkers on your staff reminds you to face the brutal facts of your reality.

<https://www.bizjournals.com/bizjournals/how-to/growth-strategies/2018/01/the-challenger-disaster-teaches-leaders-to-face.html>

## NEVER EVENTS

### Background

The term "Never Event" was first introduced in 2001 by Ken Kizer, MD, former CEO of the National Quality Forum (NQF), in reference to particularly shocking medical errors—such as wrong-site surgery—that should never occur. Over time, the term's use has expanded to signify adverse events that are unambiguous (clearly identifiable and measurable), serious (resulting in death or significant disability), and usually preventable. Since the initial never event list was developed in 2002, it has been revised multiple times, and now consists of 29 "serious reportable events" grouped into 7 categories:

- Surgical or procedural events
- Product or device events
- Patient protection events
- Care management events
- Environmental events
- Radiologic events
- Criminal events

<b>Table. Never Events, 2016</b>
<b>National Quality Forum List of Serious Reportable Events, 2016</b>
<b>Surgical events</b>
Surgery or other invasive procedure performed on the wrong body part
Surgery or other invasive procedure performed on the wrong patient
Wrong surgical or other invasive procedure performed on a patient
Unintended retention of a foreign object in a patient after surgery or other procedure
Intraoperative or immediately postoperative/postprocedure death in an American Society of Anesthesiologists Class I patient
<b>Product or device events</b>
Patient death or serious injury associated with the use of contaminated drugs, devices, or biologics provided by the health care setting
Patient death or serious injury associated with the use or function of a device in patient care, in which the device is used for functions other than as intended
Patient death or serious injury associated with intravascular air embolism that occurs while being cared for in a health care setting
<b>Patient protection events</b>

Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person
Patient death or serious disability associated with patient elopement (disappearance)
Patient suicide, attempted suicide, or self-harm resulting in serious disability, while being cared for in a health care facility
<b>Care management events</b>
Patient death or serious injury associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration)
Patient death or serious injury associated with unsafe administration of blood products
Maternal death or serious injury associated with labor or delivery in a low-risk pregnancy while being cared for in a health care setting
Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy
Artificial insemination with the wrong donor sperm or wrong egg
Patient death or serious injury associated with a fall while being cared for in a health care setting
Any stage 3, stage 4, or unstageable pressure ulcers acquired after admission/presentation to a health care facility
Patient death or serious disability resulting from the irretrievable loss of an irreplaceable biological specimen
Patient death or serious injury resulting from failure to follow up or communicate laboratory, pathology, or radiology test results
<b>Environmental events</b>
Patient or staff death or serious disability associated with an electric shock in the course of a patient care process in a health care setting
Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or is contaminated by toxic substances
Patient or staff death or serious injury associated with a burn incurred from any source in the course of a patient care process in a health care setting
Patient death or serious injury associated with the use of restraints or bedrails while being cared for in a health care setting
<b>Radiologic events</b>
Death or serious injury of a patient or staff associated with introduction of a metallic object into the MRI area
<b>Criminal events</b>
Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed health care provider
Abduction of a patient/resident of any age
Sexual abuse/assault on a patient within or on the grounds of a health care setting
Death or significant injury of a patient or staff member resulting from a physical assault (i.e., battery) that occurs within or on the grounds of a health care setting

Source: National Quality Forum. List of Serious Reportable Events.  
<https://psnet.ahrq.gov/primers/primer/3>