High Reliability

Bob Spillane MD
Interventional Radiology
Department of Radiology
Medical Director of Quality
Hartford Hospital
High Reliability Organizations (HROs)

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*USS Ronald Reagan* in the **Strait of Magellan** in 2004.

The control room at an American nuclear power plant.
High Reliability

HROs
High Reliability

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We’re all in this together...

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High Reliability—We’re all in this together
High Reliability—We’re all in this together

“With current health care and reimbursement pressures, the next innovation in IR is team performance in the IR suite.”

“Team success occurs when the team achieves tasks and works more effectually than a group of individuals working alone. The Team realizes a collective synergy from the members.”

G. Laukhuf, ND, RN, CRN, RN-BC, NE-BC ARIN Update: Teamwork is Innovation IR Quarterly Winter 2015
High Reliability– Financial Disclosures

1. I have no financial disclosures.
High Reliability—We’re all in this together
High Reliability - Agenda

Introduction
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Hartford Hospital and Why Me?
Medical Errors
  The Swiss Cheese Model
The Complex IR Environment
**High Reliability Organizations**
  Characteristics of HROs
High Reliability in IR
  **Crew Resource Management (CRM)**
Take Aways
  Hartford Hospital implementation
High Reliability—Hartford Hospital

Hartford, CT
- 800 beds

Established 1854
Acute, tertiary care hospital
- 4500 transfers per year

Level 1 Trauma Center
- LifeStar Helicopter program

Transplant
- Celebrated #3000 in 2014

1600 doctors
7000 employees
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High Reliability—Acknowledgements

CT High Reliability

Dr. Mary Cooper

Initiated 2012

25 of 28 hospitals

10,000 staff trained

“CHAMP” Card
High Reliability—We’re all in this together

Institute of Medicine
1999

44,000 – 98,000 each year

“A 727 each day”
High Reliability – Medical Disclosures

1. I have been involved with, or present for, medical errors.
High Reliability– Medical Disclosures

1. I have been involved with, or present for, medical errors.

Allow me an exercise......
High Reliability—We’re all in this together

If you have been the victim of a medical error,
High Reliability—We’re all in this together

If you have been the victim of a medical error,

If a loved one, or someone you know, has been the victim of a medical error,
High Reliability—We’re all in this together

If you have been the victim of a medical error,
If a loved one, or someone you know, has been the victim of a medical error,
If, through work, you’ve been party to, or present for, a medical error,
High Reliability—We’re all in this together

If you have been the victim of a medical error,
If a loved one, or someone you know, has been the victim of a medical error,
If, through work, you’ve been party to, or present for a medical error,

Raise your hand, please
High Reliability—We’re all in this together

EXCLUSIVE! DID FATAL MEDICAL BLUNDE KS KILL JOAN RIVERS?!

Published on: September 10, 2014
by GIA PORTFOLIO, DOUGLAS MONTERO & LEELA DE KRETSER, NATIONAL ENQUIRER
Photography by: Getty

JOAN RIVERS died as the result of “a horrific medical mistake,” The National ENQUIRER has learned exclusively from experts.

After the 81-year-old comedy icon lost her life Sept. 4 – exactly one week after undergoing a routine procedure on her vocal cords at an outpatient clinic in Manhattan – a source claims: “She could have been saved.”

An ENQUIRER investigation reveals that the minor procedure Joan underwent on Aug. 28 carried only a tiny 0.5% mortality rate – and we uncovered shocking evidence shedding new light on the tragedy.

“Investigators suspect a fatal drug cocktail” could have been administered to the 5-foot-2, 129-pound star after she entered Yorkville Endoscopy, according to a source.
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Dennis Quaid takes aim at health care mistakes

Rep. John Murtha complications

WASHINGTON — As a private pilot, actor Dennis Quaid was struck by the differences between how aviation errors and medical errors are handled.

The airline industry doesn't have much choice, Quaid noted in an interview Monday after speaking at a National Press Club luncheon. “When a crash happens, it's so public,” he said. “No one is going to fly on their airplanes unless they have that trust.”

By Rita Rubin, USA TODAY

DOCTORS: ‘Soul’ tormented by medical errors

But when a mistake occurs in a hospital, the public never hear about it. Although an estimated 100,000 people die each year because of medical errors, their deaths are swept under the rug in thousands of hospitals, “where people die,” he said. “It doesn't get the same type of attention.”
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Doctors 'Shocked' by Radiation Overexposure at Cedars-Sinai

Oct. 13, 2009
By RADHA CHITALE
ABC News Medical Unit via WORLD NEWS

Hospital officials say a computer-resetting error caused radiation overdoses for 205 patients who underwent CT scans at Cedars-Sinai Medical Center in Los Angeles.

ABC News Photo Illustration
High Reliability—We’re all in this together

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ABC News Photo Illustration

CT in Adults: Systematic Review and Meta-Analysis of Interpretation Discrepancy Rates

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Doctors 'Shocked' by Radiation Overexposure at Cedars-Sinai

Oct. 13, 2009
By RADHA CHITALE
ABC News Medical Unit via WORLD NEWS

CT in Adults: Systematic Review and Meta-Analysis of Interpretation

Results: Fifty-eight studies met the inclusion criteria (388,123 CT examinations). The pooled total discrepancy rate was 7.7% (95% confidence interval [CI]: 5.6%, 10.3%), and the major discrepancy rate was 2.4% (95% CI: 1.7%, 3.2%). The pooled major discrepancy rate was comparable for staff (2.9%; 95% CI: 1.2%, 6.7%) and residents (2.2%; 95% CI: 1.7%, 2.9%) (Q = 0.92, P = .633). The pooled major discrepancy rates for head CT (0.8%; 95%
Doctors 'Shocked' by Radiation Overexposure at Cedars-Sinai

Oct. 13, 2009
By RACHA CHITALE
ABC News Medical Unit via WORLD NEWS

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CT in Adults: Systematic Review and Meta-Analysis

Results:
Fifty-eight studies met the inclusion criteria for the systematic review and meta-analysis. The pooled relative risk for major discrepancies was 7.7% (95% confidence interval: 3.2%-12.4%). The pooled major discrepancy rate for CT scans of the abdomen was 6.5% (95% CI: 4.2%-8.8%), while it was 9.4% (95% CI: 4.8%-14.1%) for CT scans of the chest. When compared with the radiology department's range of interpretation rates, the pooled major discrepancy rate for CT scans of the abdomen was higher than the radiology department's range of interpretation rates (5.7%-9.1%). The pooled major discrepancy rate for CT scans of the chest was lower than the radiology department's range of interpretation rates (13.0%-20.0%).

Missouri Medical Malpractice and Radiology Errors

May 13, 2014 By David Zevan — Leave a Comment

When you undergo an x-ray, CT scan, or MRI scan, a radiologist is responsible for making interpretations. Have you ever wondered what would happen if a radiologist made an erroneous interpretation? Missouri medical malpractice lawyers answer that the consequences can be serious and even fatal. Many cases of misinterpretations are reported every year.
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Doctors 'Shocked' by Radiation Overexposure at Cedars-Sinai
Oct. 13, 2009
By RADHA CHITALE
ABC News Medical Unit via WORLD NEWS

Cleveland Errors in Interventional Procedures Attorney

Ohio Diagnostic Procedures Malpractice Lawyer

Medical Malpractice in Interventional Radiological Procedures
Interventional radiology is a medical specialty in which radiologists use X-rays, MRIs and other technologies to treat medical conditions. In many procedures, a catheter is inserted into an artery and moved through the body to the site of the problem.

Compensation for Errors in Interventional Procedures
The medical malpractice attorneys of Mishkind Law Firm Co., L.P.A., represent patients who have been injured because of medical errors made in interventional procedures, such as:

- Angioplasty and stent placement
- Placement of occluding devices
- Nonsurgical aneurysm repairs

When a catheter or stent is inserted or advanced improperly, it can perforate the artery, causing a life-threatening emergency. If not placed correctly, a stent or occluding device may become dislodged and damage the artery or heart.
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Swiss Cheese Model
Layered protections for failure prevention
High Reliability—We’re all in this together

Swiss Cheese Model
Layered protections for failure prevention

J. Reason
*Human Error*
Cambridge University Press
1990
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Institute of Medicine

1999

44,000 – 98,000 each year

“A 727 each day”
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A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care

John T. James, PhD

JOURNAL OF PATIENT SAFETY
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- James
  - J Patient Safety 2013;9:122-128

- Estimate based on data extrapolated from 4 data mining studies
  - Contemporary data
  - IOM To Err is Human ca. 1984

- Estimates error rate (Preventable Adverse Event, PAE)
- Extrapolates a LETHAL error rate
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Types of PAEs

The cause of PAEs in hospitals may be separated into these categories:
- Errors of commission,
- Errors of omission,
- Errors of communication,
- Errors of context, and
- Diagnostic errors
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- James

- Estimate based on data extrapolated from 4 data mining studies
  - Contemporary data
  - IOM *To Err is Human* ca. 1984

- Estimates error rate (*Preventable Adverse Event, PAE*)

- Extrapolates a LETHAL error rate

- 200 000 -400 000 per year
High Reliability- Were all in this together

- James
- Estimate based on data extrapolated from 4 data mining studies
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- Estimates error rate (*Preventable Adverse Event, PAE*)
- Extrapolates a LETHAL error rate
- 200,000 - 400,000 per year
- **Serious Harm is 10X-20X more common than LETHAL Harm**
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- James
- Estimate based on IOM recommendations
  - Contemporary
  - IOM To
- Estimates each year
- Extrapolated
- 200,000 -400,000
- Serious Harm

CONCLUSIONS

There was much debate after the IOM report about the accuracy of its estimates. In a sense, it does not matter whether the deaths of 100,000, 200,000 or 400,000 Americans each year are associated with PAEs in hospitals. Any of the estimates demands assertive action on the part of providers, legislators, and people who will one day become patients. Yet, the action and progress on patient safety is frustratingly slow; however, one must hope that the present, evidence-based estimate of 400,000+ deaths per year will foster an outcry for overdue changes and increased vigilance in medical care to address the problem of harm to patients who come to a hospital seeking only to be healed.
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The Joint Commission

National Patient Safety Goals Effective January 1, 2015

Hospital Accreditation Program

Goal 1

Improve the accuracy of patient identification.

NPSG.01.01.01

Use at least two patient identifiers when providing care, treatment, and services.

--Rationale for NPSG.01.01.01--

Wrong-patient errors occur in virtually all stages of diagnosis and treatment. The intent for this goal is two-fold: first, to reliably identify the individual as the person for whom the service or treatment is intended; second, to match the service or treatment to that individual. Acceptable identifiers may be the individual’s name, an assigned identification number, telephone number, or other person-specific identifier.

www.jointcommission.org
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High Reliability—We’re all in this together

Why does this happen?
High Reliability—We’re all in this together

We work in a COMPLEX environment
High Reliability—We’re all in this together

We work in a COMPLEX environment

Various resources
- IR Suites
- Staff needs
- Patient needs
- Transport
- Equipment needs
- IT issues “downtime”
High Reliability—We’re all in this together

We work in a COMPLEX environment

Various resources
   IR Suites
   Staff needs

Variable acuity
High Reliability—We’re all in this together

We work in a COMPLEX environment

Various resources
  IR Suites
  Staff needs

Variable acuity
High Reliability—We’re all in this together

We work in a COMPLEX environment

Various resources
IR Suites
Staff needs

Variable acuity
Emergent add-ons

Equipment issues, phone calls
High Reliability—We’re all in this together

We work in a COMPLEX environment

Various resources
  - IR Suites
  - Staff needs
  - Variable acuity
  - Emergent add-ons
  - Equipment issues, phone calls

MARCH 1, 2015

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We work in a COMPLEX environment

Various resources
IR Suites
Staff needs
Variable acuity
Emergent add-ons
Equipment issues, phone calls
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Why does this happen?

*Complex Systems are intrinsically hazardous systems*
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Why does this happen?

**Complex Systems are intrinsically hazardous systems**

**Complex Systems contain changing mixtures of latent failures within them**

*How Complex Systems Fail*

*(Being a Short Treatise on the Nature of Failure; How Failure is Evaluated; How Failure is Attributed to Proximate Cause; and the Resulting New Understanding of Patient Safety)*

Richard I. Cook, MD
Cognitive technologies Laboratory
University of Chicago
High Reliability—We’re all in this together

Why does this happen?

**Complex Systems are intrinsically hazardous systems**

**Complex Systems contain changing mixtures of latent failures within them**

**Complex Systems run in degraded mode**
High Reliability—We’re all in this together

Why does this happen?

**Complex Systems are intrinsically hazardous systems**

**Complex Systems contain changing mixtures of latent failures within them**

**Complex Systems run in degraded mode**

**Catastrophe is always just around the corner**
High Reliability—We’re all in this together

Why does this happen?

Why don’t these things happen more often?
High Reliability—We’re all in this together

Why does this happen?

Why don’t these things happen more often?
High Reliability—We’re all in this together

Why does this happen?
Why don’t these things happen more often?

*Complex Systems are heavily and successfully defended against failure*
High Reliability—We’re all in this together

Why does this happen?
Why don’t these things happen more often?

Complex Systems are heavily and successfully defended against failure

*Human Operators have dual roles: as Producers of and Defenders against failure*

---

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Why does this happen?
Why don’t these things happen more often?

Complex Systems are heavily and successfully defended against failure
Human Operators have dual roles: as Producers of and Defenders against failure
Catastrophe requires multiple failures – single point failure is not enough

How Complex Systems Fail
(Being a Short Treatise on the Nature of Failure; How Failure is Evaluated; How Failure is Attributed to Proximate Cause; and the Resulting New Understanding of Patient Safety)

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Why does this happen?
Why don’t these things happen more often?

*Complex Systems are heavily and successfully defended against failure*

*Human Operators have dual roles: as Producers of and Defenders against failure*

*Catastrophe requires multiple failures – single point failure is not enough*

*Human practitioners are the adaptable element of complex systems*
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High Reliability Organizations (HROs)
Concept developed based on complex systems that successfully avoid accidents and catastrophic failures

Examples studied: Aircraft Carrier operations
Nuclear Power generation
Commercial aviation
High Reliability—We’re all in this together

High Reliability Organizations (HROs)
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Recommendations put forth:
1. Seek to know what you don’t know
High Reliability—We’re all in this together

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Nuclear Power generation
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2. Recognize the cost of failure and the benefits of reliability
High Reliability—We’re all in this together

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Concept developed based on complex systems that successfully avoid accidents and catastrophic failures

Examples studied: Aircraft Carrier operations
Nuclear Power generation
Commercial aviation

Recommendations put forth:
1. Seek to know what you don’t know
2. Recognize the cost of failure and the benefits of reliability
3. Keep everybody in the loop
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1. High Consequence Industries
   1. Healthcare
   2. Nuclear Power
   3. Military Command and Control
   4. Commercial aviation
   5. Space Exploration
   6. Wildfire firefighting
   7. Chemical process control
   8. Deep Sea Oil/Gas exploration
   9. Deep ground mining
  10. Mass transit systems
  11. “Big Science” projects
“The healthcare industry may be the largest and most expensive endeavor in the developed world, with the United States at the top of the list of per capita expenditure.”

“A decentralized and massive undertaking”

4000-6000 hospitals (Same number of surgicenters)
Owned by 1000-2000 firms
200 000 physician offices
20 million surgical procedures with Anesthesia
1 billion prescriptions written per year
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In contrast, Nuclear Power....

About 100 Nuclear power plants in the United States
Owned by 30-40 firms
Regulated and scrutinized by the NRC
Highly-trained individuals
Extensive use of simulation and team work
High Reliability—We’re all in this together

High Consequence events: Health Care v. Nuclear Power

- Scale of catastrophe
- Publicity
- Operator risk
- Facility Risk

I cynically suggest that if the aftermath of medical errors or preventably suboptimal care events in an OR, ICU room, or emergency department bay would be to take that room out of service for days or months, that would generate a much more aggressive response for improvement by the healthcare institution than we currently see.

D Gaba MD. AAMI Monograph. Page 22
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In contrast, Nuclear Power....

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“If you’ve seen one hospital....
you’ve seen one hospital”
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Innovation Series 2004

Improving the Reliability of Health Care

Authors:
Thomas Nolan, PhD: Senior Fellow, IHI; Statistician, Associates in Process Improvement
Roger Resar, MD: Senior Fellow, IHI; Assistant Professor of Medicine, Mayo Clinic College of Medicine; Change Agent, Luther Midelfort Mayo Health System, Eau Claire, Wisconsin, USA
Carol Haraden, PhD: Vice President, IHI
Frances A. Griffin, RRT, MPA: Director, IHI

Editor: Ann B. Gordon
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Improving the Reliability of Health Care

Conclusion

This paper offers ideas for using reliability principles to reduce production defects in health care, one aspect of improving reliability. Reliability principles provide a way to examine a complex system and its processes, calculate its overall reliability, and develop mechanisms to increase the likelihood that the system will perform its intended functions reliably. Applying the lessons from reliability engineering to a health care setting requires strong leadership and commitment, but holds the promise of moving our health care system to new levels of consistency and quality.
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Medical Errors—

OR Fires happen maybe 600 times per year

Wrong patient or wrong side surgery happen maybe 50 times per week in the U.S.

High-Reliability Health Care: Getting There from Here

MARK R. CHASSIN and JEROD M. LOEB

The Joint Commission

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Managing the Unexpected
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Managing the Unexpected

Characteristics of HROs
1. Preoccupation with failure.
2. Reluctance to simplify.
3. Sensitivity to Operations
4. Commitment to Resilience
5. Deference to Expertise
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Managing the Unexpected

Characteristics of HROs

1. Preoccupation with failure.
2. Reluctance to simplify.
4. Commitment to resilience.
5. Deference to expertise.

The Basic Message of This Book

This book is about organizations, expectations, and mindfulness. Our basic message is that expectations can get you into trouble unless you create a mindful infrastructure that continually does all of the following:

--Tracks small failures
--Resists oversimplification
--Remains sensitive to operations
--Maintains capability for resilience
--Takes advantage of shifting locations of expertise

Managing the Unexpected KE Weick KM Sutcliffe, 2nd edition
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Mindfulness
High Reliability—We’re all in this together

Mindfulness

History: *L elbow pain*
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Mindfulness

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**The Doctor's World**

The Wrong Foot, And Other Tales Of Surgical Error

By Lawrence K. Altman, M.D.

Published: December 11, 2001

Most people can easily tell right from left, but for some surgeons it seems to be a problem.

At least 150 times since 1996, surgeons in hospitals in this country have operated on the wrong arm, leg, eye, kidney or other body part, or even on the wrong patient. The figure does not include near misses -- when surgeons started to operate on the wrong site or patient -- because no one collects such information.
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Highly Reliable Organizations (HROs)

“With current health care and reimbursement pressures, the next innovation in IR is team performance in the IR suite.”

“Team success occurs when the team achieves tasks and works more effectively than a group of individuals working alone. The team realizes a collective synergy from the members.”

G. Lankhart, ND, RN, CRN, RN-BC, NE-BC ARIN Update: Teamwork is Innovation IR Quarterly Winter 2015
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Highly Reliable Organizations (HROs)—**Teamwork is Innovation**

“With current health care and reimbursement pressures, the next innovation in IR is team performance in the IR suite.”

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IR Quarterly Winter 2015
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Highly Reliable Organizations (HROs)—**Teamwork is Innovation**
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1. Crew Resource Management (CRM)
   1. Cockpit Resource Management
      1. IR SUITE RESOURCE MANAGEMENT

2. Coined by John Lauber
   1. NASA

3. NTSB analysis of United Airlines flight 173 in 1979
   1. Crew was focused on a landing gear problem and the plane ran out of fuel

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3. NTSB analysis of United Airlines flight 173 in 1979
   1. Crew was focused on a landing gear problem and the plane ran out of fuel
     “...a set of training procedures for use in environments where human error can have devastating effect.”

   “focuses on interpersonal communication, leadership, and decision making in the cockpit.”

   “communication barriers are reduced and problems can be solved more efficiently, leading to increased safety.”
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Assertiveness

Outliers

The Story of Success

Malcolm Gladwell
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Crew Resource Management

The need to speak up: HIERARCHY and the POWER DISTANCE INDEX (PDI)

IBM HR researcher Geert Hofstede, 1960s-1970s

- Cross cultural psychology and its workplace impact
- Questions about how people worked together,
  how they solved problems, how they felt about authority

Hofstede's cultural dimensions theory
From Wikipedia, the free encyclopedia
(Redirected from Power distance)
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Crew Resource Management

The need to speak up: HIERARCHY and the POWER DISTANCE INDEX (PDI)

Cultures have different POWER DISTANCE INDICES or POWER GRADIENTS

Moderate to Low in the United States

Industries and Teams have different POWER GRADIENTS

Anesthesiologists and Surgeons view it as LOW
Nurses tend to view it as HIGH
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Crew Resource Management

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PERCEIVED POWER GRADIENTS LEAD TO AUTHORITY GRADIENTS
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Crew Resource Management is about Communication!

Expertise, training, equipment, and procedures appeared to be adequate protection, yet the presence of multiple defences obscured their faulty functioning, just as they often do in medical settings. A number of other problems occurred aboard Greeneville which we also see in health care. The problem was the total breakdown of communication. The Greeneville team also failed to move from a rigid hierarchical structure to a more flexible adaptive structure. Communication often breaks down in healthcare settings, which are organized to maximize status and hierarchical differences, thus often impeding information flow.

LEARNING FROM OTHER INDUSTRIES

Lessons learned from non-medical industries: the tragedy of the USS Greeneville*

K H Roberts, C T Tadmor
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Crew Resource Management is about

Communication

Box 1 Problems aboard Greeneville

- Video monitor that tracks the courses of other ships failed
- Response to monitor breakdown was “business as usual” instead of hypervigilance
- Lunch ran late
- The Captain took the controls and failed to use the crew as “back up”
- Communication broke down among crew members
- Initial periscope depth observation gave cause for concern, but wasn’t noted
- The fire control technician did not update contacts
- The sonar data collection and analysis was delayed
- Fire control and sonar failed to notice discargo position of Ehime Maru
- The final briefing was not held
- The final periscope search was abbreviated

Key messages

To maintain safety healthcare organizations must:
- Routinely make observations of situational cues and indicators of poor safety and report them to accountable sources.
- Ensure equipment failure back ups exist and are used.
- Ensure that everyone openly discusses errors, near misses, and adverse events.
- Value and teach teamwork in the running of the organization.
- Develop a leadership team that can recognize possible time and resource constraints and reduced redundancy, and will take extra steps to compensate for increased risks.
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Intimidating behavior

Often ascribed to MDs, but it’s not just the MDs

Occurs with MDs, RNs, Techs, Pharmacists

Includes loud or profane language, but also things like,

- condescending language
- not returning phone calls or pages
- intimidating or belittling body language
- impatient behaviors or language
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Intimidating behavior

Not tolerated by HROs

Why?

**Because they suppress reporting of safety concerns**
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What are we doing with this at Hartford Hospital?

The Recommendations

Do the _safe_ thing...for every patient every time

Objectives

- Discuss safety culture
- Introduce our expected behaviors to support patient safety.
- Engage you in what you can do to prevent errors and eliminate patient harm.
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Crew Resource Management
Improved Communication
Structured interaction

3-Way Repeat Back
When information is transferred...

1. **Sender initiates** communication using Receiver’s Name. Sender provides a request or information to Receiver in a clear and concise format.

2. **Receiver acknowledges** receipt by a repeat-back of the request or information.

3. **Sender acknowledges the accuracy** of the repeat-back by saying, **That’s correct!** If not correct, Sender repeats the communication.

A Safety Phrase: “Let me repeat that back…”

Train our ears to listen for “That’s Correct!” – it’s a codeword for “we understand each other.”
High Reliability—We’re all in this together

Crew Resource Management

Phonetic Clarifications
For sound alike words and letters, say the letter followed by a word that begins with the letter...

A Alpha          J Juliet          S Sierra
B Bravo         K Kilo           T Tango
C Charlie       L Lima           U Uniform
D Delta         M Mike           V Victor
E Echo          N November       W Whiskey
F Foxtrot       O Oscar         X X-Ray
G Golf          P Papa           Y Yankee
H Hotel         Q Quebec         Z Zulu

Adopted by NATO, International Civil Aviation Organization, Federal Aviation Administration, International Telecommunication Union, and US Nuclear Power Industry

Numeric Clarifications
For sound alike numbers, say the number and then the digits

15...that’s one-five
50...that’s five-zero

45...that’s four-five
425...that’s four-two-five
4 to 5...that’s the range four dash five

...and always use leading zeros – as in 0.9
High Reliability—We’re all in this together

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Expectations for interactions
High Reliability—We’re all in this together

Multi-tasking is bad

Be in the Moment

Self-Check Using STAR

top  Pause for 1 to 2 seconds to focus our attention on the task at hand

hink  Consider the action you’re about to take

clect  Concentrate and carry out the task

ewview  Check to make sure that the task was done correctly and that you got the correct result

STOP is the most important step. It gives your brain a chance to catch up with what your hands are getting ready to do.
High Reliability—We’re all in this together

Multi-tasking is bad

Self-Check Using STAR

Stop  Pause for 1 to 2 seconds to focus our attention on the task at hand

Think  Consider the action you’re about to take

Act  Concentrate and carry out the task

Review  Check to make sure that the task was done correctly and that you got the correct result

STOP is the most important step. It gives your brain a chance to catch up with what your hands are getting ready to do.
High Reliability—We’re all in this together

Focusing on the human interaction and the transfer of information

Pay Attention Moments

Conditions that increase the chance you will experience an unintended error when performing a familiar, routine task:

- Working under time pressure
- Doing multiple things at the same time
- Distractions
- Interruptions
- Boredom
- Mental or physical exhaustion
- Just not paying attention

Any sound familiar???

STAR reduces your chances of making an unintended mental slip or lapse by more than 10 times...
High Reliability—We’re all in this together

Focusing on the human interaction and the transfer of information
High Reliability—We’re all in this together

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The expectation to speak up
High Reliability—We’re all in this together

Staff training at Hartford HealthCare

The Permission
AND
The Expectation
to
QUESTION THE SITUATION

Assertiveness

- The willingness to state and maintain a position until convinced otherwise by facts
  - Requires initiative and courage to act

Behavior Continuum

PASSIVE | ASSERTIVE | OVER-AGGRESSIVE
--- | --- | ---
'Too nice' | Actively involved | Dominating
Procrastinates | Ready for action | Intimidating
Avoids conflict | Useful contributor | Abusive
'Along for the ride' | Speaks up | Hostile
High Reliability—We’re all in this together

The Permission AND The Expectation to QUESTION THE SITUATION

POLITE PERSISTENCE

GRACIOUSNESS
High Reliability
We’re all in this together...

Human practitioners are the adaptable element of Complex Systems—Richard I Cook MD
Human practitioners are the adaptable element of Complex Systems—Richard I Cook MD

Thank you for having me.