

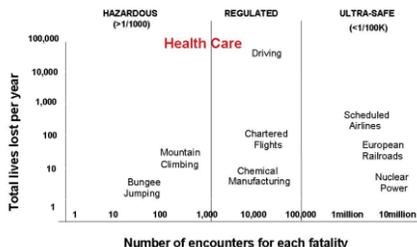
Are your patients safe?
What to do about it!

Ron Sanderson, DrPH, MEd, RRT, RPFT, AE-C

Presentation Outline

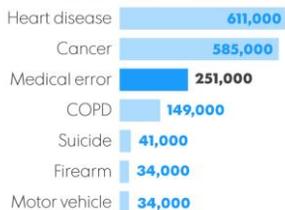
- Need for increased Patient Safety
- Recommendations of Patient Safety Orgs.
- Risks of mechanical ventilation
- Mechanical ventilation safety
- Numerous patient safety tools
- Commitment to Patient Safety

Healthcare is hazardous



Medical Error
avoidable deaths in U.S. hospitals

MEDICAL ERRORS NATION'S THIRD BIGGEST KILLER IN 2013



Source: Martin Makary, Michael Daniel study at Johns Hopkins University School of Medicine.
Jim Sargent, USA TODAY



U.S.A.

200,000 Lives Lost Due To Medical Error!

- IOM 1999 "To err is human" reported 98,000 lives lost due to medical error.
- 2013 Journal of Patient Safety reports 210,000 - 440,000
- 2010 OIG DHHS reports 180,000 lives lost in Medicare alone

Journal of Patient Safety: September 2013 - Volume 9 - Issue 3 - p 122-128

How can this be determined (estimated)????

Errors of commission
 Errors of omission
 Errors of communication
 Contextual errors
 Diagnostic errors

Journal of Patient Safety: September 2013 - Volume 9 - Issue 3 - p 122-128

Preventable Adverse Events (PAE)

Error of commission

Wrong action, or it was the right action, but performed improperly. Ex. gall bladder removed, but the intestine is nicked, patient develops a serious infection

Preventable Adverse Events (PAE)

Errors of omission obvious action was necessary, yet not performed at all. Ex. Need a β -blocker, not prescribed, patient died prematurely.

Failure to follow evidence-based guidelines are difficult to detect, partly because there are many complex guidelines and also because adverse consequences of failure to follow guidelines may be delayed until after discharge.

Preventable Adverse Events (PAE)

Errors of communication: can occur between 2 or more providers or between providers and patient.

Ex., cardiologists failed to warn their 19-year-old patient not to run. Patient had experienced syncope while running, diagnostic testing was inconclusive; cardiologists knew he was not ready to run but failed to warn him. He died 3 weeks later while running.

Preventable Adverse Events (PAE)

•**Contextual errors** occur when a physician fails to take into account unique constraints in a patient's life that could bear on successful, post discharge treatment. For example, the patient may lack the cognitive ability to comply with a medical treatment plan or may not have reasonable access to follow-up care.

Preventable Adverse Events (PAE)

Diagnostic error: resulting in delayed treatment, wrong treatment, or no effective treatment
 overtreatment or mistreatment of the patient until the mistake is discovered.

Preventable Adverse Events (PAE)

There are at least 3 time-based categories of PAEs

Immediate harm is excess bleeding because of an overdose of an anticoagulant drug such as that which occurred to the twins born to Dennis Quaid and his wife.

Harm not apparent for weeks or months Ex. infection with Hepatitis C virus as a result of contaminated chemotherapy equipment.

Harm that occurs years later is exemplified by a nearly lethal pneumococcal infection in a patient that had had a splenectomy many years ago, yet was never vaccinated against this infection risk as guidelines and prompts require.

Journal of Patient Safety: September 2013 - Volume 9 - Issue 3 - p 122-128

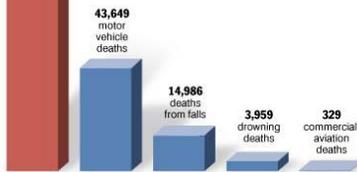
These numbers have faces:



Accidental Deaths in the U.S.

An estimated one million people are injured by errors during hospital treatment each year and 120,000 people die as a result of those injuries, according to a study led by Lucian Leape of the Harvard School of Public Health. Here's how that number compares with other causes of accidental death in the United States*.

*SOURCE: (for accidental deaths shown in blue) National Safety Council. Data are for 1996. KEVIN BURKETT / iStockphoto.com



• Errors are not tolerated in Commercial Aviation, nor should they be in Medicine.



Two 747s going down in the U.S.A. everyday!
= 182,000/year



31,033 Pilots, Surgeons, Nurses and Residents Surveyed*

% Positive Responses from:	Pilots	Medical
Is there a negative impact of fatigue on your performance?	74%	30%
Do you reject advice from juniors?	3%	45%
Is error analysis system-wide?	100%	30%
Do you think you make mistakes?	100%	30%
Easy to discuss/report mistakes?	100%	56%

* Sexton JB, Thomas EJ, Helmreich RL, Error, stress and teamwork in medicine and aviation: cross sectional surveys. DOI: 10.1136/bmj.320.7237.745, 18 March 2000

1. Can Simulation Increase Patient Safety?

It is an absolute requirement for pilots, for CPR, and for race car pit crews

2. The Meaning of "Check-Six"



The term "Check-Six" has its origin in common direction-telling methods (as seen in films like *Indiana Jones and the Last Crusade*, or *Twelve O'Clock High*). For example, "I see an airplane at 11 O'clock", referring to the bogey (another aircraft) being to the front and slightly left of the aircraft ("12 O'clock" being directly ahead). Using this technique, "6 O'clock" is directly to the rear of your aircraft (and is also a very vulnerable position to be attacked from), or otherwise your posterior. Thus, the term, "Check your Six O'Clock," or as shorten for brevity-sake to "Check-Six," means to watch your rear.

Patient Safety
MOVEMENT
zero preventable deaths by 2020

Embedded Video

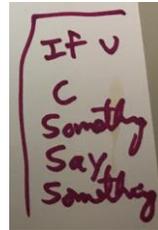
thepatientsafetymovement.org



Dr. Brian Sexton, Duke Patient Safety Center

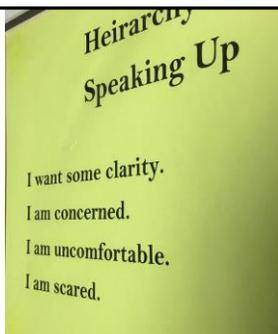
The Science of Gratitude
3 Good Things
WISER Program

dukepatientsafety.com
<https://youtu.be/QWhILRBVsT4>



Examples:
Poor compressions
Poor report
Bad hand hygiene

Speaking up
About
Larger
Issues



2017
National Patient Safety Goals
The purpose of the National Patient Safety Goals is to improve patient safety. The goals focus on problems in health care safety and how to solve them.

The Joint Commission

TJC 2017 National Patient Safety Goals

Identify patients correctly

NPSG.01.01.01 NPSG.01.03.01

Use at least two ways to identify patients. For example, use the patient's name *and* date of birth. This is done to make sure that each patient gets the correct medicine and treatment.

Make sure that the correct patient gets the correct blood when they get a blood transfusion.

Improve staff communication

NPSG.02.03.01

Get important test results to the right staff person on time.

TJC 2017 National Patient Safety Goals

• Use medicines safely

- NPSG.03.04.01
- NPSG.03.05.01 NPSG.03.06.01
- Before a procedure, label medicines that are not labeled. For example, medicines in syringes, cups and basins. Do this in the area where medicines and supplies are set up.
- Take extra care with patients who take medicines to thin their blood.
- Record and pass along correct information about a patient's medicines. Find out what medicines the patient is taking. Compare those medicines to new medicines given to the patient. Make sure the patient knows which medicines to take when they are at home. Tell the patient it is important to bring their up-to-date list of medicines every time they visit a doctor.

TJC 2017 National Patient Safety Goals

• Use alarms safely

- NPSG.06.01.01
- Make improvements to ensure that alarms on medical equipment are heard and responded to on time.

TJC 2017 National Patient Safety Goals

• Prevent infection

- NPSG.07.01.01
- NPSG.07.03.01 NPSG.07.04.01 NPSG.07.05.01 NPSG.07.06.01
- Use the hand cleaning guidelines from the Centers for Disease Control and Prevention or the World Health Organization. Set goals for improving hand cleaning. Use the goals to improve hand cleaning.
- Use proven guidelines to prevent infections that are difficult to treat. Use proven guidelines to prevent infection of the blood from central lines. Use proven guidelines to prevent infection after surgery. Use proven guidelines to prevent infections of the urinary tract that are caused by catheters.

TJC 2017 National Patient Safety Goals

• Identify patient safety risks

- NPSG.15.01.01
- Find out which patients are most likely to try to commit suicide.
- Prevent mistakes in surgery
- UP.01.01.01
- UP.01.02.01 UP.01.03.01
- Make sure that the correct surgery is done on the correct patient and at the correct place on the patient's body.
- Mark the correct place on the patient's body where the surgery is to be done. Pause before the surgery to make sure that a mistake is not being made.



Clinical Practice Guidelines

ahrq.gov

TeamSTEPPS[®] 2.0 Communication

Importance of Communication

- Joint Commission data continues to demonstrate the importance of communication in patient safety
- 1995 - 2005: Ineffective communication identified as root cause for nearly 66 percent of all reported sentinel events*
- 2010 - 2013: Ineffective communication among top 3 root causes of sentinel events reported**

** (JC Root Causes and Percentages for Sentinel Events (All Categories) January 1995-December 2005)*
*** (JC Sentinel Event Data (Root Causes by Event Type) 2004-2012)*



Team Strategies & Tools to Enhance Performance & Patient Safety

TeamSTEPPS[®] 2.0 Communication

Communication Challenges

- Language barrier
- Distractions
- Physical proximity
- Personalities
- Workload
- Varying communication styles
- Conflict
- Lack of information verification
- Shift change



Team Strategies & Tools to Enhance Performance & Patient Safety

TeamSTEPPS[®] 2.0 Communication

SBAR Provides...

A framework for team members to effectively communicate information to one another

Communicate the following information:

- Situation—What is going on with the patient?
- Background—What is the clinical background or context?
- Assessment—What do I think the problem is?
- Recommendation—What would I recommend?



Team Strategies & Tools to Enhance Performance & Patient Safety

TeamSTEPPS[®] 2.0 Communication

Call-Out is...

A strategy used to communicate important or critical information

- It informs all team members simultaneously during emergency situations
- It helps team members anticipate next steps



Team Strategies & Tools to Enhance Performance & Patient Safety

Uzawa Y. et al.
Respir Care 2008;53(3):329-337. 2008

Evaluation of User-Interface Simplicity and Human Errors in Modern Generation Mechanical Ventilators

using (PB840, Servoⁱ, Evita XL and Newport e500)

When given ventilator setup, vent changes and alarm response tasks:

experienced operators made 11% errors

Newly trained operators made **23% errors**

Risks of Mechanical Ventilation

Barotrauma	Pressure necrosis (oral, facial or tracheal)
Atelectrauma	Vocal cord paralysis
Volutrauma	Trauma (due to intubation or suction)
Pneumothorax	Infection
Absorption atelectasis	Decreased blood pressure
Oxygen toxicity	Reduced cerebral blood flow
Alveolar distention	Fluid overload
Aspiration	Decreased cardiac output
Near-drowning	Decreased coronary vessel perfusion
ICU delirium, PTSD	Decreased cerebral perfusion pressure
Hypercapnia	Decreased renal perfusion
Hypocapnia	Decreased urine output
Hypoxia	Tracheomalacia
Suffocation	Over sedation
Death	

Most Powerful Ventilator Safety Intervention:

Get the Patient off the ventilator!

Reduce Ventilator Length of Stay

Reduce Risk of injury or death:
 Highest Risk at ventilator initiation
 High Risk intra-hospital transport
 Beyond that it is high risk all the time

How Can Automated Ventilation
 Increase Patient Safety?

What is "Automation"?



What can You/I/We Do?

- Wash Hands
- Be cognizant of our potential to error
- Set alarms and respond appropriately
- Ask for help
- Repeat back
- Teach back
- Deal with our own stress/burn out
- Speak up
- Thank you notes/Gratitude
- 3 Good things
- Check-6
- Request a translator

It is the process,
 not the people.

Systems Approach to Error Reduction

"All people make mistakes, but good people yield when they know their course is wrong, and repair the evil. The only crime is pride." —

(gender adjustments) Sophocles



What can You/I/We Do?

- Wash Hands
- Be cognizant of our potential to error
- Set alarms and respond appropriately
- Ask for help
- Repeat back
- Teach back
- Deal with our own stress/burn out
- Speak up
- Thank you notes/Gratitude
- 3 Good things
- Check-6
- Request a translator

Make
A
Commitment