CHALLENGES TO IMPROVE PATIENT SAFETY IN THE OPERATING ROOM

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Outlines

• (Where) The OR: A Special Hazardous Place
• What Risks in OR?
• Why do errors happen in OR?
• What about medical errors in the US?
• How do others do to reduce errors?
• And you – What will you do to reduce errors in your everyday work?
The OR: A Special Hazardous Place

- Many Risks
  - Many Predefined Risks
  - Many unexpected Events
- Many Caregivers
- Many Interactions
- Many Relative Sub Processes
- A complex System
- A lot of Stress
- Unique Specific Patient
What Risks in OR?

- Identification errors
- Site errors
- Retained sponges & instruments
- Surgical site Infections
- Unanticipated major bleedings
- Failure of equipment
- Anesthesiology mishaps & medication errors
- Burns due to cautery misuse
- Neuropathies due to bad positioning
Why do errors happen in OR?

Risky behaviors in OR:

• No pre op checking of equipment's
• Surgeon running two rooms
• Surgeon entering room after draping
• Not checking radiology procedures and pathology reports
• Lack of learning how new equipment functions
• Many intra op verbal orders
• Unlabeled clear solutions
• Use of cautery in O2 rich environment
• Continuing to close during sponge count
What about Medical errors in US

• IOM 1999: 44 000-98 000 deaths per year.

• AHRQ 2004 report (Agency for Healthcare Quality and Research): 195 000 deaths a year.

• BMJ 2016 (the 3rd leading cause of death): 251 000 deaths per year in US (after heart disease and cancer)
Safety problems occur because of:

- Inability to translate knowledge into practice
- Inability to apply new technology safely and appropriately
- Inability to make the best use of resources (financial and human)

Blaming health providers is not the answer!
We must address the system flaws
NO CHANGE !!!!

• Still focusing on individuals
• Weak Team dynamics
• Weak Communication
• Hierarchical structure
• Culture of Blame
Strategies used to reduce errors

WE CANNOT CHANGE THE HUMAN CONDITION...
WE CAN CHANGE THE CONDITIONS UNDER WHICH PEOPLE WORK.

James Reason
• A Surgical quality improvement program is so effective that each year a hospital uses it, on average, it has the opportunity to:
  o Prevent 250–500 complications
  o Save 12–36 lives
  o Reduce costs by millions of dollars
A five-skill model

• Designed to help change an organization’s culture for better outcomes by:
  o placing less focus on events, errors and outcomes, and more focus on risk,
  o managing the behavioral choices focused on a juste and accountable system
  o Integrating the Learnings in the system design
Focus on the risk
Why do errors happen?

Rarely due to lack of knowledge of care givers

1. Lack of organisation (time, resources)
2. Lack of verification
3. Lack of coordination (Human – Machine interface)
4. Lack of communication

Risky behaviors = LACK of SAFETY CULTURE
Focus on the risk
Build a safety culture

• Build a culture which encourages coaching and honesty at all levels, in order to bring about the best possible outcomes

• Encourage the creation of an environment of free and open reporting within process systems
Management of behavioral choices

The Three Behaviors we can expect

Human Error
Inadvert action: Slip, lapse, mistake
opportunity to learn and to improve systems
Manage through changes in:
- Processes/Procedures
- Training
- Design/Environment

At-Risk Behavior
A choice: Risk is not recognized or Believed
Insignificant or Justified
Manage through:
- Removing incentives for at-risk behaviors
- Creating incentives for healthy behaviors
- Increasing situational awareness

Reckless Behavior
Conscious Disregard of unreasonable Risk
Manage Through:
- Remedial action
- Punitive action

Console
Coach
Punish
Focus on the risk
Matrix for Risk Management Calculation

- High impact and likely to occur
- Low impact and likely to occur
- High impact but unlikely to occur
- Low impact and unlikely to occur
Design the system
Learn about the processes of Error

Reason Model, 1993
Swiss cheese model
Learn about the processes of Error - The 5 Why’s

Primary root cause analysis of sentinel events

- delay in treatment
  - 84% - breakdown in communication
- wrong site surgery
  - > 50% - breakdown in communication between surgical team members and the patient and family
- operative and post-op complications
  - 66% - failure in communication
- ventilator-related deaths and injuries
  - 70% - communication breakdown
- infant death and injury during delivery
  - 72% involved communication issues (with 55 percent citing organization culture as a barrier to effective communication and teamwork)

Learn about the processes of Error-
WHO’s 10 Objectives for Safe Surgery

1. Operate on the correct patient & correct site.
2. Prevent harm from administration of Anesthesia.
4. Prepare for risk of high blood loss.
5. Avoid inducing an allergic or ADR for patients at risk.
6. Minimize the risk for Surgical Site Infection.
7. Prevent inadvertent retention of instruments or sponges in surgical wounds.
8. Accurately identify all surgical specimens.
9. Effectively Surgical Team communication.
10. Routine surveillance of surgical capacity, volume and results.
Mortality declined from .88 to .80

Reported Patient Safety Never Events (PSN) rose from 559 to 637

Reported events due to errors/complications decreased from 35.2% to 24.3%

Mean OR start to incision time was shorter

There was improvement in the belief (SAQ) that all personnel take responsibility for patient safety

Strategy for highly performed Systems

1. Process review
2. Communication
3. Training and education
4. Teamwork
5. Coordination

_Crossing the Quality Chasm:_
_A New Health System for the 21st Century_
1. Standardization to improve processes

**AAOS: 1998**
Orthopedic surgeons have 25% chance of performing a wrong site surgery during a 35 years career:
- Wrong knee arthroscopies
- Wrong level spine fusions

**ACS: 2002:**
Recommends the development of guidelines to ensure correct patient, correct site surgery
A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population

2. Improve communication

**IOM 2011 report:**
- Process review
- Communication
- Training and education
- Teamwork
- Reviews, Coordination

Safety is not residing in a piece of equipment,

it is a collaboration between members,

and can be achieved by better communication and full adherence to system
Standardized Communication

- Pilots are committed to standardized communication
- Speak-repeat
- Read-repeat
Barriers to effective communication

**PROVIDER-PROVIDER**
- Bad dynamics
- Not listening/Not asking questions
- Poor sharing of patient info
- Not using standard comms
- Blame and Shame

**PROVIDER-PATIENT**
- Provider: lack of cultural competency, busy, non-respectful, patronising, discriminating, stressed, tired, ill
- Patient: Illiterate, confused, not same language or culture as provider

**INSTITUTIONAL**
- Lack of standardization communication policies
- Not sharing information
- Conflicting agendas (leaders, providers, patients)
Barriers to effective team communication in the OR

• OR setting: masks, noise, ...
• Hierarchical structure
• Work overload
• Distracting communication
• Communication plan
• Accountability
Improving communication
 Operating Rooms briefing and debriefing

• Also called a team checklist
• Addressed safety issues by:
  o Decreasing reliance on memory
  o Standardizing processes
  o Increasing access to information
  o Providing feedback
3. Training and Education

IOM 2011 report:
- Process review
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- Teamwork
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Approaches to Team Training

CLASS-ROOM BASED TEACHING

• Lectures
• Videos
• Case-reviews
• Problem-solving
• Exams

MEDICAL SIMULATION

• High-fidelity simulated OR
• Practice new protocols in work setting
4. Teamwork

- Learn and use people’s names
- Be assertive when required
- If something doesn’t make sense, find out the other person’s perspective
- Always do a team briefing before starting a team activity and a debrief afterwards
- When conflict occurs, concentrate on “what” is right for the patient, not “who” is right or wrong

IOM 2011 report:
- Process review
- Communication
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- Teamwork
- Reviews, Coordination
Leadership Roadmap

“White Coat Leadership”

• All knowing
• “In charge”
• Autocratic
  “Buck stops here”
• Impatient
• Blaming
• Controlling

“Lean” Improvement Leadership

• Patient
• Knowledgeable
• Facilitator
• Helper
• Teacher / Student
• Communicator
• Guide

(Respect, Challenge, and Grow people and partners)
What makes an effective team leader

- Setting priorities and delegating tasks
- Conducting briefs and debriefs
- Empowering team members to speak freely and ask questions
- Organizing training activities for the team
- Inspiring team members and maintain a positive group culture
- Utilizing resources to maximize performance
- Resolving team conflicts
- Accepting ‘patients’ as members of the team?
5. Reviews, Coordination

IOM 2011 report:
- Process review
- Communication
- Training and education
- Teamwork
- Reviews, Coordination

The Five “C’s” of Effective Teamwork in Health Care

| Common goal | Every team member shares and understands the short- and long-term goals of the team and the organization. |
| Commitment  | Every team member is committed to attaining the goals. |
| Competence  | Every team member has the knowledge, skills, behaviors, and attitudes necessary to accomplish successfully their role in the team’s activities. |
| Communication | Team members communicate effectively and efficiently with each other, with the patient, and with other parties (whether animate or inanimate) through whatever means are required to accomplish desired goals. |
| Coordination | Team members efficiently and effectively work together and with other needed technology, people, and resources to accomplish desired goals. |

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Quality is a journey not a destination
THANK YOU

TIME FOR QUESTIONS