The Tragedy of Error
Learning Objectives

- List attributes of a Just Culture
- Describe how a Just Culture leads to improved patient safety
- Use the Just Culture algorithm
Institute for Safe Medication Practices

- Medication Safety Intensive Workshop

http://www.ismp.org/educational/MSI/
How does this sound?

“There are activities in which the degree of professional skill which must be required is so high, and the potential consequences of the smallest departure from that high standard are so serious, that one failure to perform in accordance with those standards is enough to justify dismissal.”

Lord Denning
English Judge
Historical Perspective: Punitive Culture

- Manage risk by discipline
- Discipline severity determined by severity of outcome
- Violations of procedure are simply unacceptable
- Problem: prevent learning from mistakes, promote covering up of errors

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People Make Mistakes
People Make Mistakes
People Make Mistakes
Should We Be Blame Free?

- Recognizes that people make mistakes
- Response to problems with punitive culture
- Problem: lack of accountability
People Make Mistakes

Is this the same as the others? Is this actually a mistake?
What is “Just Culture”?  

“The single greatest impediment to error prevention in the medical industry is ‘that we punish people for making mistakes.’”

- Dr. Lucian Leape  
Professor, Harvard School of Public Health  
Testimony before Congress on Health Care Quality Improvement
What is “Just Culture”?

“People make errors, which lead to accidents. Accidents lead to deaths. The standard solution is to blame the people involved. If we find out who made the errors and punish them, we solve the problem, right?

Wrong. The problem is seldom the fault of an individual; it is the fault of the system. Change the people without changing the system and the problems will continue.”

-Don Norman

Author, the Design of Everyday Things
To Err is Human

- Human Error is not a behavioral choice
- Errors cannot be managed directly
- Must manage causes and consequences of errors through system design
Introduction to Just Culture

- Emphasis on learning and shared accountability
- Encourages everyone to look for risk and be cautious of behavioral choices
- Best results from good system design coupled with good behavior choices
- Accountability is NOT DEPENDENT on outcomes

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Support of Safety – Balance of Accountability

The Problem Statement

What system of accountability best supports system safety?

As applied to:
- Providers
- Managers
- Healthcare Institutions
- Regulators

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Five Skills

Values and Expectations
System Design
Behavioral Choices
Good or Bad Outcomes
Learning Systems
Justice and Accountability

Five Skills – Values and Expectations

- Values and Expectations
  - Organization must define its mission
  - Must determine what values it needs to establish reasonable expectations for processes
  - Perfection is not a reasonable expectation
    - Must set goals that are realistically achievable

Five Skills – System Design

- System Design
  - Must design our systems to facilitate good decisions
  - Must anticipate human error, capture errors before they become critical, and permit recovery when the errors become critical

Five Skills – Behavioral Choices

- Behavioral Choices
  - Coach our employees to be consistent and honest in their behaviors
  - Help them make the best choices and learn from mistakes
  - Must learn how to use remediation and discipline to shape the choices of our employees

Five Skills – Learning Systems

- **Learning Systems**
  - Must work toward a learning culture
    - Encourages early identification of risks in the system
    - Promote honesty and forthright sharing of “near misses”
  - We cannot wait for negative outcomes to occur before we find ways to improve the system

Five Skills – Accountability and Justice

- Accountability and Justice
  - The organization must promote fairness and justice in the disciplinary process
  - Must find balance between assigning blame for simple errors and never holding anyone accountable for their choices
  - Sometimes the system is to blame, and we can change the system accordingly

The Three Behaviors

### Human Error
- Product of Our Current System Design and Behavioral Choices
- Manage through changes in:
  - Choices
  - Processes
  - Procedures
  - Training
  - Design
  - Environment

### At-Risk Behavior
- A Choice: Risk 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 Substantial and Unjustifiable Risk
- Manage through:
  - Remedial action
  - Punitive action

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The Three Behaviors – Human Error

- Humans are not perfect
- Systems should expect errors to occur and account for them as a normal part of the process
- A slip, a lapse, a mistake can happen to the best of us, so **human error** becomes an opportunity to learn and to improve
- Any system that is one failure away from harm, be it human error or equipment failure, is vulnerable

Human Brain and Error

- Confirmation Bias
  - We see what we expect to see
- We accept information that agrees with our hypothesis, and reject information that does not
The Human Brain is Powerful

THE PAOMNNEHAL PWEOR OF THE HMUAN MNID. Aoccdrnig to a rschearch at Cmabrigde Uinervtisy, it deosn't mtttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and Isat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.
What do you see?
How about here?
Look Alike, Sound Alike
Look Alike, Sound Alike
Inattentional Blindness

- Sometimes people fail to see the obvious
- Most processing of perceptions occurs outside of consciousness
- Fail to see an object because attention isn’t focused on it
  - Inattentionally blind to other information since it isn’t your focus

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The Three Behaviors – At Risk Behavior

- People get complacent and start to drift away from the rules
- They begin to engage in **at-risk behavior**, placing themselves and others at risk
- Do not perceive the risk, or have temporarily forgotten it.

What is Drift?

- At-risk behaviors
- Employees desire to accomplish more
  - Encouraged by employer?
- Perceptions of risk fade
- At-risk behaviors are behavioral choices
  - Unknowingly create unjustifiable risk

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Driving
Driving
The Three Behaviors – Reckless behavior

- In very rare occasions, people engage in **reckless behavior**
  - Choosing knowingly to place themselves or others in harm’s way
  - They see the risk and they understand the possible harm
  - Choose to place their own self-interest above the rest of the system

Managing Error
Managing Human Error

- Studies show 50% probability of human error for unfamiliar task performed at speed.
- Probability drops with better systems, routines, familiarity.
- Limit for human performance = 0.01%.
- 1 out of 10,000.
Managing Human Error

- Console employee if made proper behavioral choices
- Look for system redesign
Managing At-Risk Behavior

- Behavioral choice driven by perception of consequences
  - Barcode Scanning
  - Alert Fatigue

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At-Risk Behaviors are Learned

- Precautions fade away as experience increases
- Employees can even be rewarded for shortcuts
  - “He’s fast”
  - “She can handle anything”
- Employee is not choosing to put patient in harm’s way, but deciding that the risk is worth the reward

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Managing At-Risk Behavior

- Examine system for causes
- Examine perceived consequence/incentives
- Change perceptions
- Employee “coaching”
  - Help to see risk
  - Discussion of risk vs reward

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Managing Reckless Behavior

- Employee perceives the risk
- Unable to justify the behavior
- Employee makes a conscious decision to ignore the substantial risk

Examples
- Surgeon uses instrument which fell on the floor
- Working under the influence
What can we control?

- Behavioral Choices
- System Design
Just Culture Algorithm

The Duty to Produce an Outcome (system under control of employee)

- Was the duty to produce an outcome known to the employee?
  - Yes
  - Was it possible to produce the outcome?
    - Yes: Did the social utility associated with the deviation outweigh the risks associated with the failure to produce the outcome?
      - Yes: Is the rate of failure to produce the outcome within the expectations of those to whom the duty is owed?
        - Yes: Accept outcome
        - No: Assist employee in producing better outcomes, or consider punitive action
      - No: Investigate circumstances leading to impossibility
    - No: Investigate circumstances leading to impossibility
  - No: Investigate circumstances leading to failure to know of duty

The Duty to Follow a Procedural Rule (system controlled by the employer)

- Was the duty to follow a rule known to the employee?
  - Yes
  - Was it possible to follow the rule?
    - Yes: Did the employee knowingly violate the rule?
      - Yes: Console employee and conduct human error investigation
      - No: Support employee for decision to violate rule
    - No: Investigate circumstances leading to impossibility
  - No: Investigate circumstances leading to failure to know of duty

Note: This test applies when the employee controls the system and is responsible for the output of the system.
Other Safety Tools
Continuous Drip

PICU

Nurse 1
- Receive & Review order in Center
- Determine location for dose
- Obtain syringe from Pharm
- Collect supplies
- Find another nurse to double check
- Double check 5 rights w/MAR
- BCMA - patient ID band & syringe

Nurse 2

Physician
- Physician placed order

Pharmacist
- Verify order
- Fill the order
- Deliver order

Group 4

Group 5
### Failure Mode and Affects Analysis

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<td>8</td>
<td>Administration</td>
<td>Bolus other infusion meds not intended</td>
<td>Patient harm</td>
<td>5</td>
<td>Infusing with vaso-active meds</td>
<td>RI: Education/training</td>
<td>4/60: Dedicated Infusion Line - &quot;Other&quot;</td>
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<td>9</td>
<td>Administration</td>
<td>Overdose</td>
<td>Patient harm</td>
<td>5</td>
<td>Wrong concentration selected</td>
<td>Pharmacist</td>
<td>5/60: &quot;Feeder&quot; Plan for Pump Bulbs/Medications - Pharmacy</td>
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<td>10</td>
<td>Administration</td>
<td>Overdose</td>
<td>Patient harm</td>
<td>5</td>
<td>Not double checking the dose</td>
<td>RN: Education/training</td>
<td>4/60: &quot;Hard and Soft Limits on Pump&quot; - Pharmacy</td>
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<tr>
<td>11</td>
<td>Administration</td>
<td>Bolus wrong med</td>
<td>Patient harm</td>
<td>5</td>
<td>Pump gets mixed up (human error)</td>
<td>Labels</td>
<td>5/30: &quot;Bolus&quot; for pump bolus meds - Pharmacy</td>
</tr>
<tr>
<td>12</td>
<td>Administration</td>
<td>Bolus other infusion meds not intended</td>
<td>Patient harm</td>
<td>5</td>
<td>Infusing with vaso-active meds</td>
<td>Double check</td>
<td>2/30: &quot;Bolus&quot; for pump bolus meds - Pharmacy</td>
</tr>
<tr>
<td>13</td>
<td>Administration</td>
<td>Overdose</td>
<td>Patient harm</td>
<td>5</td>
<td>Button missing</td>
<td>BCM/A</td>
<td>5/25: &quot;Bolus&quot; for pump bolus meds - Pharmacy</td>
</tr>
</tbody>
</table>
Root Cause Analysis (RCA)

- Used to determine cause of error
Agency for Healthcare Research and Quality

- Patient Safety Culture
  - [http://www.ahrq.gov/legacy/qual/patientsafetyculture/pharmsurvindex.htm](http://www.ahrq.gov/legacy/qual/patientsafetyculture/pharmsurvindex.htm)

**Pharmacy Survey on Patient Safety**

This survey asks for your opinions about patient safety in this pharmacy and takes about 15 minutes to complete. Answer only about the pharmacy location/store where you received this survey.

- **Staff** means EVERYONE who works in this pharmacy, including pharmacists, pharmacy technicians, pharmacy clerks, etc.
- **Patient safety** is the prevention of patient harm resulting from the processes of health care delivery. In the pharmacy setting, it means that:
  - The right patient receives the right medication in the right dose at the right time by the right route, and
  - The patient or caregiver understands the purpose and proper use of the medication.
- **A mistake** is any type of medication error, mistake, incident, or quality-related event, regardless of whether or not it reaches the patient or results in patient harm. Mistakes may be related to or include:
  - Prescribing, transcribing, dispensing, administering, monitoring (use of medication), unsafe conditions or procedures in the pharmacy, etc.
- If a question does not apply to you or you don't know the answer, please answer “Does Not Apply or Don’t Know.”

**SECTION A: Working in This Pharmacy**

How much do you agree or disagree with the following statements? Remember, “staff” means everyone working in this pharmacy.

1. This pharmacy is well organized
   - Strongly Disagree □1 □2 □3 □4 □5 □6 □7 □8 □9
2. Staff treat each other with respect
   - Strongly Disagree □1 □2 □3 □4 □5 □6 □7 □8 □9
Summary

- Human Error is unavoidable
- System design is crucial
- Organizations must promote learning
- Monitor and coach at-risk behavior
Learning Assessment

List attributes of a Just Culture

- Which of the following are attributes of a Just Culture?
  A. Human error is unavoidable
  B. Healthcare can be safe but can’t be risk free
  C. Safety means the complete absence bad outcomes
  D. All of the above
  E. A and B
Learning Assessment

Describe how a Just Culture leads to improved patient safety

- A Just Culture promotes learning from mistakes and “near misses” while still holding employees accountable for reckless behavior
  - True
  - False
Just Culture and Patient Safety

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