JUST CULTURE
BUILDING A CULTURE OF LEARNING

Presented by

NCPS
Nebraska Coalition for Patient Safety

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ACKNOWLEDGEMENT

This curriculum was developed by Outcome Engenuity, LLC. This company was founded in 1997 by David Marx. The firm set out to help the world manage human error through the integration of systems engineering, human factors, and the law.

Learn more about Outcome Engenuity at https://www.outcome-eng.com/

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PROBLEM STATEMENT

We need to better understand the principles and tools of just culture to know whether this is the right time to advocate to senior leaders that we implement this innovation.

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OUR TIME TOGETHER

Begin 1:00 End 4:30

Break 2:30 - 2:45?

This is your training. Be sure we meet your needs by:

- Confirming the problem statement
- Asking questions to clarify
- Agreeing upon our goal…
  We want to better understand the role of Just Culture principles and tools within our facilities and discuss how to implement them to improve our culture of safety.

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JUST CULTURE DEFINED

A system of shared accountability

Organization
- Systems you have designed
- Responding to employee behaviors in a fair and just manner

Employees
- Behavioral choices
- Reporting their errors
- Reporting system vulnerabilities

A system of justice that reflects reality…complex socio-technical systems collide with the free will of fallible human beings

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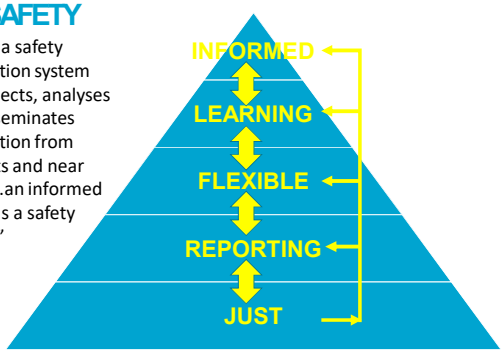
ROLE OF JUST CULTURE IN A CULTURE OF SAFETY

"Create a safety information system that collects, analyses and disseminates information from incidents and near misses...an informed culture is a safety culture."



Reason, J. *Managing the Risks of Organizational Accidents*. Hampshire, England: Ashgate Publishing Limited; 1997.

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ROLE OF JUST CULTURE IN A CULTURE OF SAFETY

- Just – Clear line between acceptable & unacceptable behavior; shared accountability between management and staff to address root causes of events; management is accountable for system design and staff are accountable for their behavior
- Reporting – Reporting is rewarded; people in direct contact with risks and hazards report their errors and near misses
- Flexible (Teamwork) – The organization is adaptable and flexible; authority gradients relax when safety information is exchanged; there is psychological safety to speak up about safety related information
- Learning – The organization is willing to learn from its safety information systems and sensemaking conversations; it takes action to implement evidence-based innovations to improve structures and processes of care

Reason, J. *Managing the Risks of Organizational Accidents.* Hampshire, England: Ashgate Publishing Limited; 1997.

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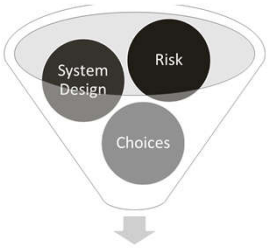
FIVE SKILLS SUPPORT JUST CULTURE

1. ALIGNING VALUES & **EXPECTATIONS**
2. DESIGNING BETTER **SYSTEMS**
3. MAKING BETTER BEHAVIORAL **CHOICES**
4. LEARNING TO SYSTEMATICALLY **LEARN**
5. FINDING **JUSTICE**



Errors as Outcomes

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HSOPS 2.0

- Why mess with a good thing? Need to...
  1. Reword complex survey items
  2. Add Not Applicable/Don't Know...increases percent positive!
  3. Revise Nonpunitive Response to Error to a Just Culture framework...Response to Error
  4. Revise Staff Positions and Units/Work Areas
- Significant Changes
  - Only 5 items unchanged, 21 items dropped, 25 items reworded, 10 new items
  - 10 composites instead of 12

1. Communication about error
2. Communication openness
3. Handoffs and information exchange
4. Hospital management support for patient safety
5. Organization learning
6. Reporting Patient Safety Events
7. Response to Error
8. Staffing and work pace
9. Supervisor/manager/clinical leader support for patient safety
10. Teamwork

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Just Culture 5 Skills	HSOPS 2.0 Items
1. Align Values and Expectations- the expectations and behavior of managers are consistent with the organization's mission and values	"Hospital management seems interested in patient safety only after an adverse event happens." "My supervisor/manager or clinical leader seriously considers staff suggestions for improving patient safety."
2. Design Better Systems and **3. Learn to Systematically Learn-** managers design reliable systems that anticipate human error and facilitate individual decision-making; managers support proactive learning from errors and near misses	"This unit lets the same patient safety problems keep happening." "This unit regularly reviews work processes to determine if changes are needed to improve patient safety." "In this unit, changes to improve patient safety are evaluated to see how well they worked."

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Just Culture 5 Skills	HSOPS 2.0 Items
4. Make Better Behavioral Choices- managers anticipate that humans make mistakes so they provide staff with behavioral choices, in return staff report hazards and errors	"When staff in this unit see someone with more authority doing something unsafe for patients, they speak up." "In this unit, we work together as an effective team." "When a mistake is caught and corrected before reaching the patient, how often is this reported?"
5. Find Justice and Accountability- managers balance system and individual accountability in a fair and consistent manner	"When staff make errors, this unit focuses on learning rather than blaming individuals." "In this unit, staff feel like their mistakes are held against them." "In this unit, there is a lack of support for staff involved in patient safety errors."

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WHAT IS WORKPLACE JUSTICE TODAY?

Do you struggle to know how to best respond to individual employee behaviors?

- Individually?
- As an organization?
- What do front-line staff think?

Why do we struggle?

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GROUP 1

Source: De-identified hospital, 2008

An experienced surgeon sees a new piece of equipment at a conference. Back at the hospital, a sales representative persuades him to use the equipment for a procedure. He has never used the equipment before and accidentally punctures the patient's bowel. The surgeon repairs the bowel and the patient recovers fully. The OR has a policy that says new equipment will be officially approved and training will be conducted prior to its use.

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GROUP 2

Source: De-identified hospital, 2008

An experienced surgeon sees a new piece of equipment at a conference. Back at the hospital, a sales representative persuades him to use the equipment for a procedure. He has never used the equipment before and accidentally punctures the patient's bowel. The surgeon repairs the bowel **but the patient develops life-threatening complications due to an infection caused by the accidental puncture.** The OR has a policy that says new equipment will be officially approved and training will be conducted prior to its use.

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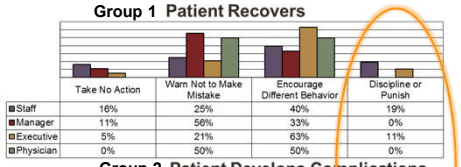
SURVEY RESULTS

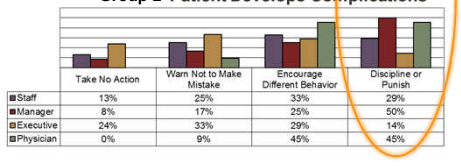
SOURCE: DE-IDENTIFIED HOSPITAL, 2008

Group 1 Patient Recovers



	Take No Action	Warn Not to Make Mistake	Encourage Different Behavior	Discipline or Punish
Staff	16%	25%	40%	19%
Manager	11%	56%	33%	0%
Executive	5%	21%	63%	11%
Physician	0%	50%	50%	0%

Group 2 Patient Develops Complications



	Take No Action	Warn Not to Make Mistake	Encourage Different Behavior	Discipline or Punish
Staff	13%	25%	33%	29%
Manager	8%	17%	25%	50%
Executive	24%	33%	29%	14%
Physician	0%	9%	45%	45%

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OUTCOME / SEVERITY BIAS

WHAT IS IT?

When leadership allows the severity of the outcome/ level of harm to drive its response to:

- employees' choices that contribute to an event
- system design that contributes to an event

After we've made a mistake that results in an adverse outcome, we usually understand the risk involved and work to make better choices.

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TRAGIC EFFECTS OF OUTCOME / SEVERITY BIAS

Is this a strategy we want to use to improve system design and decrease risk?

Bad outcome may be punished, even if caused by human error.

We may over-react to single events, underreact to risk

OUTCOME / SEVERITY BIAS

Lack of bad outcome may result in unchecked at-risk/reckless behaviors.

Risk remains in the system. (No Harm/No Foul)

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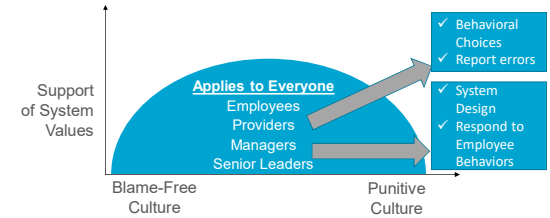
WHAT WE SEEK: SHARED ACCOUNTABILITY



The proposition is this: framed by the right systems of learning, the right systems of justice, we can design systems, and help humans make choices in those systems, to produce better outcomes at the individual, local, and societal level. David Marx, Founder of Outcome Engenuity

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FIVE SKILLS

1. ALIGNING VALUES & **EXPECTATIONS**
2. DESIGNING BETTER **SYSTEMS**
3. MAKING BETTER BEHAVIORAL **CHOICES**
4. LEARNING TO SYSTEMATICALLY **LEARN**
5. FINDING **JUSTICE**

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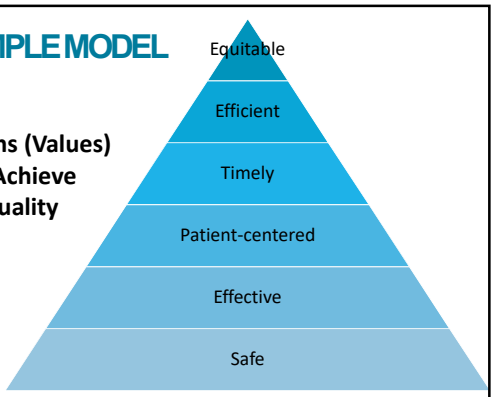
A SIMPLE MODEL

Six Aims (Values) to Achieve Quality



Institute of Medicine. Crossing the Quality Chasm. Washington, DC: National Academy Press, 2001.

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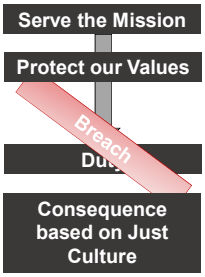
A SIMPLE MODEL

https://www.jchealthandlife.org/about/mission-vission/

Our Mission and Values



Is breaking a rule ever the right thing to do to be consistent with our mission and values?

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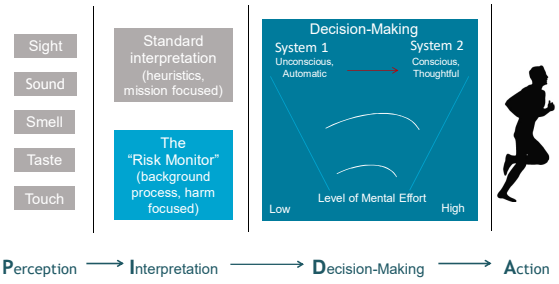
THE P.I.D.A. MODEL

How do we make decisions?



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THINKING FAST AND SLOW

How we think (cognitive bias) leads to error

Humans have two ways of thinking and attending to stimuli in the world around them (we allocate our attention to two systems)

- System 1—Thinking fast…automatic, fast, no effort, no sense of voluntary control
- System 2—Thinking slow…conscious decision to allocate attention to a specific mental activity
- All clinical decision-makers maker errors due to cognitive bias
- ¾ of diagnostic errors may be due to these mental shortcuts

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x 24

Kahneman D. *Thinking Fast and Slow*. New York: Farrar, Straus, and Giroux; 2011.

O'Sullivan ED, Schofield SJ. Cognitive bias in clinical medicine. J R Coll Physicians Edinb 2018; 48: 225–232

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THINKING FAST

- Inattentional blindness…You can multitask but only if the tasks are easy and undemanding; intense focus on a task can make people effectively ignore other stimuli
- Anchoring—reliance on an initial piece of information, which may be irrelevant, to make subsequent judgments
- Availability—make judgments about probability of an event based on ease (availability) of recalling examples
- Choices (prospect theory)—we are risk-averse; we are more likely to act to avoid a loss than to achieve a gain
- Framing—context in which choices are presented affects decision
- Substitution bias—substitute the answer to a simple question when you are really trying to answer a more complex question

Chabris C & Simons D. The Invisible Gorilla: How Our Intuitions Deceive Us. New York: Random House; 2010.
Kahneman D. Thinking Fast and Slow. New York: Farrar, Straus and Giroux, 2011.
https://en.wikipedia.org/wiki/Thinking,_Fast_and_Slow

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TO ERR IS HUMAN

Because we too often rely on Thinking Fast

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TO DRIFT IS HUMAN

- How often do you drive >5 mph over the posted speed limit on the interstate?
- What happened the last time you do this?
- We all drift as we get comfortable in a task.
- What stops our drift?

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QUESTIONS?
CONCERNS?
IDEAS?

If you want to change your culture, you will regularly measure staff perceptions of safety culture and link those perceptions to interventions including training programs such as TeamSTEPPS and Just Culture.

If you expect that humans will err and drift, you will value designing better systems that account for human fallibility.

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FIVE SKILLS

1. ALIGNING VALUES & EXPECTATIONS
2. DESIGNING BETTER **SYSTEMS**
3. MAKING BETTER BEHAVIORAL CHOICES
4. LEARNING TO SYSTEMATICALLY LEARN
5. FINDING JUSTICE

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WHAT IS A SYSTEM?

- A set of elements that interact to produce an outcome
- Donabedian's Framework is the foundation of quality assessment in health care

Structure → Process → Outcome

How care is delivered, organized, financed People, equipment, policies/procedures Equivalent to system design, capacity for work	Tasks performed that are intended to produce an outcome Most closely related to outcomes Causal relationship between process & outcomes	"Ultimate Validator" Changes in individuals and populations due to health care Time to develop, multifactorial, random component

Donabedian A. An introduction to quality assurance in health care. New York: Oxford University Press; 2003.

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COMPLEXITY OF SYSTEMS

- Health care is a sociotechnical system; human beings work in social structures within complex technical environments to achieve goals
- Overarching goals are too large and complex for individuals or even single teams
- Multiteam systems consist of two or more teams that interact to manage complex sociotechnical systems and achieve collective goals
- Think of multiteam systems as the fundamental structure of care delivery

Braithwaite J, Runciman WB, Merry AF. Towards safer, better healthcare: harnessing the natural properties of complex sociotechnical systems. Qual Saf Health Care 2009;18:37–41.
DeChurch LA, Zaccaro SJ. Perspective: Teams won't solve this problem. Hum Factors. 2010;52(2):329-334.
Marks MA, DeChurch LA, Mathieu JE, Panzer FJ, Alonso A. Teamwork in multiteam systems. Journal of Applied Psychology. 2005;90(5):964-971.

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SYSTEM DESIGN:

SCENARIO
Wrong R_x

A nurse is discharging a patient. Home medications brought in upon admission are stored in a locked cabinet at the nurse's station. A second nurse retrieved the patient's home medications from the nurse's station. At no time in the process did the nurse actually confirm the medications with the patient using two identifiers.

A week later, the patient presented to his local primary care provider not feeling well. He brought his home medications with him. The medications were for another patient, prescribed by a different provider, and filled at a pharmacy the patient does not use.

In this case, the assisting nurse had taken the wrong patient's medications from the locked cabinet.

Ask "Why?" for this action and identify system design factors including all of the teams that may be accountable for medication reconciliation upon discharge.

Source: Nebraska Coalition for Patient Safety

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HUMAN PERFORMANCE STRATEGIES

INVALID…will not work

- Make no mistakes
- No harm no foul
- Machines are 100% reliable

VALID…will work

- Increase knowledge and skill
- Perceive and acknowledge risk
- Implement performance shaping factors to decrease risk

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SYSTEM DESIGN

Performance Shaping Factors	Example
Environment: Change the precursors to human error and at-risk behavior	Housekeeping responsible for ensuring a clean gait belt is on hook at the head of the bed in each room.
Barriers: Prevent individual errors	Smart infusion pumps that contain pre-programmed libraries with standardized dosing for commonly used intravenous medications
Recovery: Catch errors downstream	• Bar Code Medication Administration at bedside using 7 rights of medication administration (right…patient, drug, dose, route, time, reason, documentation) • Surgical Safety Check List • Sponges with radiopaque marker
Redundancy: Add parallel elements	• Independent double check of high alert medications • Independent double check of calculations for weight-based dosing

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QUESTIONS?
CONCERNS?
IDEAS?

BREAK?

As a manager, you control system reliability.
Design your systems to anticipate and detect human error and to perceive and acknowledge risk.
Be prepared to address consequences of human error.

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FIVE SKILLS

1. ALIGNING VALUES & EXPECTATIONS
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3. MAKING BETTER BEHAVIORAL CHOICES
4. LEARNING TO SYSTEMATICALLY LEARN
5. FINDING JUSTICE

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HOW DO WE CREATE A HUMAN-CENTERED SYSTEM OF WORKPLACE JUSTICE?

"The single greatest impediment to patient safety is that we punish people for making mistakes."
~ Lucian Leape

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WHAT IS JUST?

Pur~~X~~tive?

Blam~~X~~-free?

Appropriate Accountability

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M Intention regarding the outcome – to cause **harm**

R I S K Intention regarding the act itself – to take **risk**

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M **Purpose to Cause Harm:** conscious objective to cause harm

R I S K

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PURPOSE TO CAUSE HARM

KEY = INTENT

NEVER JUSTIFIABLE!

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M **Purpose to Cause Harm:** conscious objective to cause harm

Knowingly Cause Harm: having knowledge that harm is practically certain to occur

R I S K

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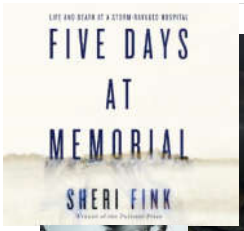
KNOWINGLY CAUSE HARM

KEY = INTENT



RARELY JUSTIFIABLE

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M

Purpose to Cause Harm: conscious objective to cause harm

Knowingly Cause Harm: having knowledge that harm is practically certain to occur

R I S K

Reckless

At-Risk Behavior Intention regarding act itself – to take risk

Human Error

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M

Purpose to Cause Harm: conscious objective to cause harm

Knowingly Cause Harm: having knowledge that harm is practically certain to occur

R I S K

Reckless

At-Risk Behavior

Human Error

THE THREE CORE BEHAVIORS

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HUMAN INTENTIONS

SOURCE: U.S. MODEL PENAL CODE

H A R M

Purpose to Cause Harm: conscious objective to cause harm

Knowingly Cause Harm: having knowledge that harm is practically certain to occur

R I S K

Reckless

At-Risk Behavior

BEHAVIORAL CHOICE

THE THREE CORE BEHAVIORS

Human Error

NOT A CHOICE

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THE THREE CORE BEHAVIORS

KEY - INTENT

Human Error

Inadvertent action: slip, lapse, mistake

Manage through changes in:

- Processes
- Procedures
- Training
- Design
- Environment
- Behavioral Choices

CONSOLE HUMAN MANAGE SYSTEM

NOT A CHOICE!

- **Slip** - doing something other than intended
- **Lapse** - an omission - forgot to do something
- **Mistake** - misperception, mistake of fact - looked at A, but saw B

- Have you ever made an error? How did you feel?
- How can you support the people in your organization - set them up for success?

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THE THREE CORE BEHAVIORS

KEY - INTENT

Human Error

Inadvertent action: slip, lapse, mistake

Manage through changes in:

- Processes
- Procedures
- Training
- Design
- Environment
- Behavioral Choices

CONSOLE HUMAN MANAGE SYSTEM

At-Risk Behavior

A choice: risk not recognized or believed justified

Manage through:

- Removing incentives for at-risk behaviors
- Creating incentives for healthy behaviors
- Increasing situational awareness

COACH HUMAN MANAGE SYSTEM

"Drift"

- Why do we drift?
- What are some examples of drift?
- Help employee "see" and understand the risk
- Make the **right** thing to do the **easy** thing to do

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THE THREE CORE BEHAVIORS

- This is where we "draw the line."
- Intentionally taking a "gamble" on the outcome.
- The one behavior we expect our employees to absolutely avoid.

Human Error

Inadvertent action: slip, lapse, mistake

Manage through changes in:

- Processes
- Procedures
- Training
- Design
- Environment
- Behavioral Choices

CONSOLE HUMAN MANAGE SYSTEM

At-Risk Behavior

A choice: risk not recognized or believed justified

Manage through:

- Removing incentives for at-risk behaviors
- Creating incentives for healthy behaviors
- Increasing situational awareness

COACH HUMAN MANAGE SYSTEM

Reckless Behavior

Conscious disregard of a substantial and unjustifiable risk

Manage through:

- Remedial action
- Disciplinary action
- Punitive action

PUNISH HUMAN MANAGE SYSTEM?

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THE BIGGEST THREAT TO SAFETY?

Human Error	At-Risk Behavior	Reckless Behavior
Inadvertent action: slip, lapse, mistake	*A choice: risk not recognized or believed justified*	*Conscious disregard of a substantial and unjustifiable risk*
Manage through changes in: • Processes • Procedures • Training • Design • Environment • Behavioral Choices	Manage through: • Removing incentives for at-risk behaviors • Creating incentives for healthy behaviors • Increasing situational awareness	Manage through: • Remedial action • Disciplinary action • Punitive action
CONSOLE HUMAN MANAGE SYSTEM	COACH HUMAN MANAGE SYSTEM	PUNISH HUMAN MANAGESYSTEM?

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WHY IS AT-RISK BEHAVIOR THE BIGGEST THREAT TO SAFETY?

- Human errors are often single events or failures
- Reckless behaviors do not occur frequently
- At risk behaviors can become habitual and pervasive
  - *Nothing bad happened before (risk not recognized)*
  - *This is the way we've always done it*
  - *Everyone else does it*
  - *As humans, we **drift** from safe behavior*
  - *"Incentives" for at-risk behavior – short cuts, workarounds, time/production pressure, competing priorities, system design, performance shaping factors*
  - *Compliance with safe practices is not the priority*
  - *Compliance with safe practices is not the standard*
  - *Compliance with safe practices is not monitored*
  - *Compliance with safe practices is not enforced*

"What you permit, you promote"

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At-risk VS Reckless

The "Reasonable Person" Standard

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CROSSING THE LINE

SPORTS EXAMPLE

Purpose to Cause Harm

Knowingly Cause Harm

Reckless — "The Reasonable Person"

At-Risk Behavior

Human Error

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REASONABLE

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HOW SHOULD WE RESPOND?

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LEADERSHIP

DEFINITION

Sets the standards and rules; determines the risk threshold; determines justice. Imposes the rules.

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SUBJECTIVE STANDARD

DEFINITION

A legal standard that is peculiar to a particular person and based on the person's individual views and

Black's Law Dictionary, 8th ed.

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OBJECTIVE STANDARD

DEFINITION

A legal standard known as "The Reasonable Person Standard," this is a "similar person in a similar situation."

Black's Law Dictionary, 8th ed.

The "substitution test"

What are other examples of using the objective standard when determining whether a person's actions were appropriate and reasonable?

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THE THREE "VOICES"

L LEADERSHIP

Determines mission and values
Determines risk and tolerability
Creates and enforces the rules

S SUBJECTIVE STANDARD

Review the P.I.D.A. Model: what did this person perceive, interpret, and decide (if it was a decision) leading into their action.

O OBJECTIVE STANDARD

Reasonable Person Test ("similar person, similarly situated")
For JC, preference is within your org. culture

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BIAS WARNING

L LEADERSHIP

Determines mission and values
Determines risk and tolerability
Creates and enforces the rules

LEADERS: Beware of outcome bias, personal bias, and past experiences.

S SUBJECTIVE STANDARD

Review the P.I.D.A. Model: what did this person perceive, interpret, and decide (if it was a decision) leading into their action.

O OBJECTIVE STANDARD

Reasonable Person Test ("similar person, similarly situated")
For JC, preference is within your org. culture

OBJECTIVE STANDARD: Be wary of outcome bias, personal bias, and past experiences.

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WORKPLACE JUSTICE - WE ARE ALL JUDGES

Purpose	Knowledge	Reckless	At-Risk	Error
• Intent to harm	• Intent to act, knowing harm will occur	• Choice to gamble with the outcome	• Drift from safe behavior	• Unintended act or omission

- Each action has its own level of accountability
- We do not expect perfection from humans – instead, we expect safe choices
- We all watch how the organization responds to each of these behaviors – this shapes employee views of workplace justice (Marx, 2019)

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QUESTIONS?
CONCERNS?
IDEAS?

Understanding intent can help you develop a fair, consistent system of workplace justice.
Use the three voices – Leader, Subjective, Objective - to help you respond appropriately.
We do not expect perfection – we expect safe choices.

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FIVE SKILLS

1. ALIGNING VALUES & EXPECTATIONS
2. DESIGNING BETTER SYSTEMS
3. MAKING BETTER BEHAVIORAL CHOICES
4. LEARNING TO SYSTEMATICALLY LEARN
5. FINDING JUSTICE

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LEARNING CULTURE

"HUNGRY" FOR KNOWLEDGE

- Less focus on the error, event, outcome
- More focus on understanding:
  - Risk
  - System design
  - Behavioral choices
  - Human factors that contribute to errors and choices
- High reliability principles
  - Vigilant for human and system sources of risk
  - Openly discuss these sources of risk
  - Readily report mistakes, near misses, unsafe situations
  - Seek to understand and remedy underlying causes of events
  - Systems thinking – situational awareness
  - Resilience
- System Design + Human Interaction = Outcomes

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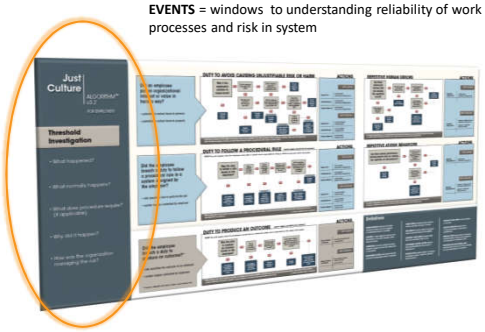
EVENTS = windows to understanding reliability of work processes and risk in system



Structured, consistent, fair approach to event investigation = learning from events = improved reliability = better outcomes

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THRESHOLD INVESTIGATION

- What happened?
- What normally happens?
- What does procedure require?
- Why did it happen?
- How were we managing it?

Increasing Value

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THRESHOLD INVESTIGATION

What happened?

- Subjective standard
- Interview person(s) involved in the event
- Tell them how you will use the information
- Use open-ended questions
- Let them tell their story about what happened
- Listen
- Review any related documentation looking for the facts

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THRESHOLD INVESTIGATION

What normally happens?

- Interview the person involved
  - Walk you through the process
  - How is this job/action usually performed?
  - What is "the norm"?
- Interview a similarly situated person – same questions as above
- Look for the objective or reasonable person standard
- Perform the "substitution test"
- Tell them how you will use the information
- Use open-ended questions
- Let them tell you about how the process is currently working
- Listen
- The "norm" is not the reason why a violation occurred; instead it can tell you the prevalence of the behavior

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THRESHOLD INVESTIGATION

What does procedure require?

- Why wait to ask this now? Why not ask this first?
- Ask someone not involved in the event
- Look it up
- This will tell you:
  - What was supposed to happen
  - How the system was designed to work
  - What else might this tell you?

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HOUSEKEEPING

A housekeeping worker was waxing the floors around 10:00 p.m. He could not find a wet floor sign and would have had to go to another building to search for one. Believing he was alone in the building, he did not search for a warning sign.

The Chief Financial Officer slipped on the wet floor and severely damaged his knee. The housekeeping staff frequently had to search for the wet floor warning signs which caused them to get behind on their work. The housekeeping manager was aware of the unavailability of signs, but did not take any action to purchase more.

No Wet Floor Sign: Answer the first 3 Threshold Questions

found on the left panel of your Just Culture Algorithm

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THRESHOLD INVESTIGATION

Why did it happen?

- Begin looking for causes
- **Basic investigative rules (5 rules of causation):**
  1. Seek to explain the causes behind each human error
  2. Search for an explanation for every at-risk behavior
  3. Failure to act is only causal when there is a pre-existing duty to act (from where does the duty arise?)
  4. Negative descriptors should not be used (poorly, inadequately)
  5. Clearly show the cause and effect relationship
- Remember that a person who has erred may not know why they have erred.
- Seek to understand the process so you can see the risks involved.

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PERFORMANCE SHAPING (HUMAN) FACTORS

FACTORS THAT INFLUENCE HUMAN PERFORMANCE

Think about the last mistake you made

INTERNAL

- Physical
  - Height, strength
  - Perception (vision, hearing)
  - Illness/Injury*
  - Medications*
  - Alcohol/Drugs*
  - Eating/Elimination*
- Psychological
  - Stress, fatigue, fear*
  - Interpretation (e.g. Attention)
    - Thinking fast leads to bias
    - Thinking slow takes effort
  - Fear
- Knowledge, Skills, Experience

ENVIRONMENT

- Lighting
- Noise
- Distractions

SYSTEM

- Structures
  - Supervision/Leadership
  - Equipment/Tools/Resources
  - Staffing
- Processes
- Culture

*TeamSTEPPS IMSAFE Checklist: Illness, Medications, Stress, Alcohol/Drugs, Fatigue, Eating/Elimination

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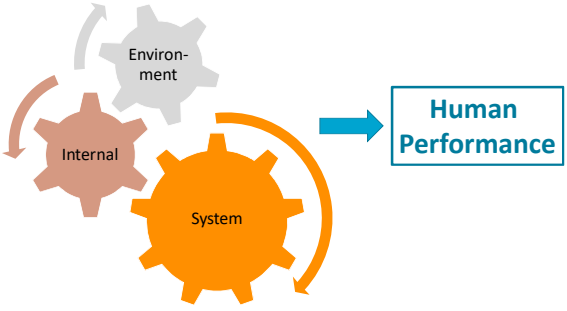
THE ROLE OF SYSTEM DESIGN



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CAUSAL DIAGRAMMING: A BRIEF INTRODUCTION

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HOW TO BUILD

Starting Point: 5 Threshold Questions

1. Identify the undesired outcome far right-hand side
   - Harm to persons
   - Harm to property
   - Increased risk (likelihood and potential to cause harm)
2. To the left, from top to bottom in order of time, identify the **direct** and **probabilistic** causes that had to line up for this harm or potential harm to occur (the ***"but for"*** causes...but for the dog unrestrained in the pickup, he would not have jumped out, knocked my mirror off and been hurt)
3. Ask "why?" for every error and every choice to continue to identify direct and probabilistic causes. If you don't know "why," don't assume…investigate.
4. Assess breaches of duty using the Just Culture Algorithm™

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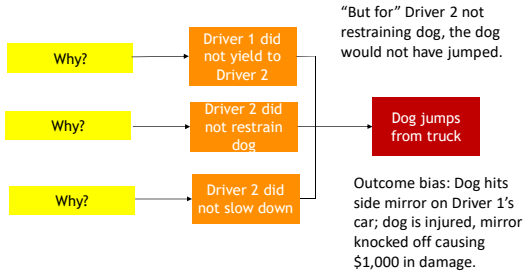
MANY TO ONE



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An Example of Building the Causal Diagram to Answer Threshold Questions

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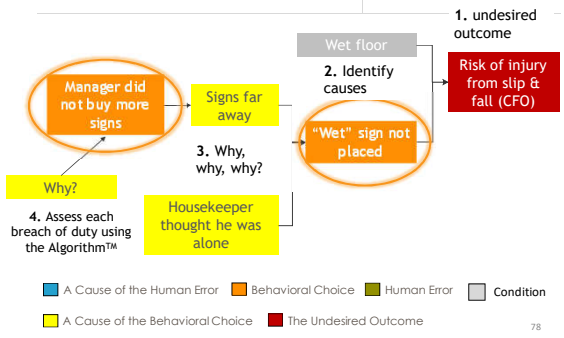
HOUSEKEEPING

Breach of Duty?



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QUESTIONS?
CONCERNS?
IDEAS?

Events are windows to understanding risks in your systems and processes.
Just Culture shifts focus from errors and outcomes to learning about systems and behaviors.
Using a structured approach to event investigation will improve organizational learning.

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FIVE SKILLS

1. ALIGNING VALUES & EXPECTATIONS
2. DESIGNING BETTER SYSTEMS
3. MAKING BETTER BEHAVIORAL CHOICES
4. LEARNING TO SYSTEMATICALLY LEARN
5. FINDING JUSTICE

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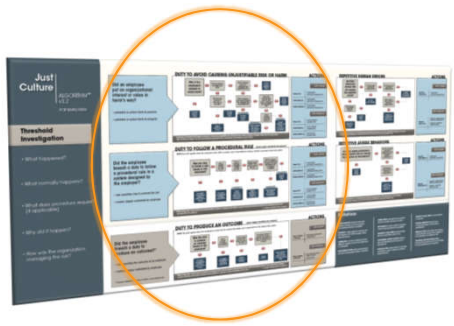

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WHICH DUTY?

HELPFUL HINTS

The duty to avoid causing unjustifiable risk or harm — Refrain From

The duty to produce an outcome — To Do

The duty to follow a procedural rule — How To

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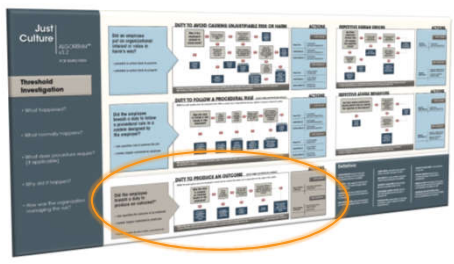
DUTY TO PRODUCE AN OUTCOME "TO DO"



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FREEWAY ACCIDENT

Which duty?

The medical records clerk has been having trouble getting to work on time. He has a three month old child and has found the early morning daycare drop-off to be quite difficult. He has been counseled by the medical records supervisor about his repetitive tardy arrivals at work. He has been put on notice that, per policy, one more tardy day this month would result in disciplinary action. Today, he arrived late to work again. He claims that he was stuck behind an accident on the freeway that had caused the freeway to be closed – trapping a ½ mile stretch of cars on one section of the freeway for about 30 minutes. The freeway closure was verified by television news reports.

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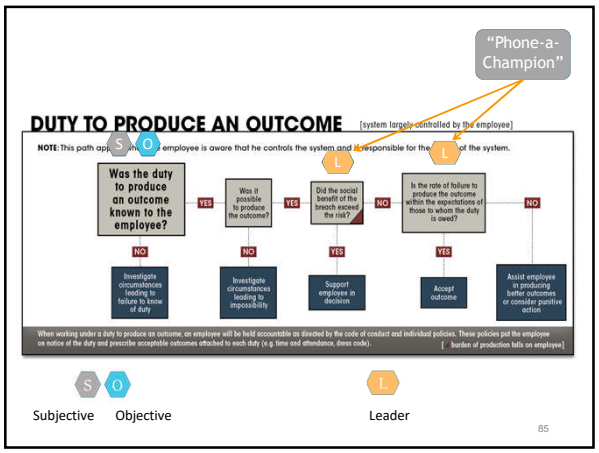

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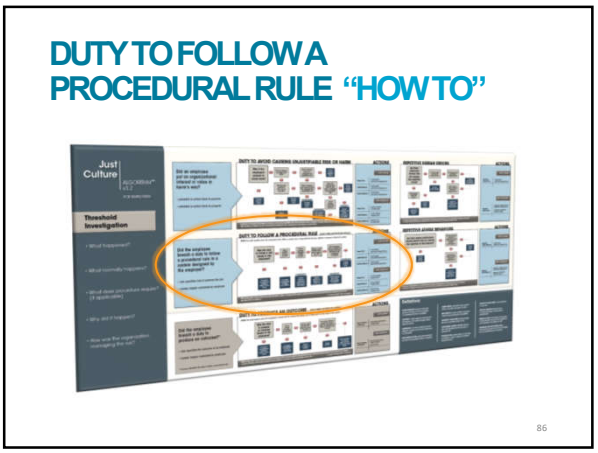

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HAND HYGIENE

Which duty?

A hospital had been working very hard to improve hand hygiene to prevent infections and keep patients safe. All staff were to use hand gel upon leaving and entering every patient room, with no exceptions. Secret shopper audits showed excellent compliance with hand hygiene on nursing units.

While completing care for patient A, a nurse turned around to see Patient B, across the hall, crawling out of the end of the bed.

Patient B was an elderly frail female with osteoporosis who had been identified at high risk for falls. There was no one else nearby to help.

The nurse quickly rushed across the hall to Patient B's bedside, reaching her just in time to catch her as she tried to stand and began to topple over. The nurse helped Patient B get seated safely on the bed.

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HAND HYGIENE

1. What happened?
2. What normally happens?
3. What does procedure require?
4. Why did it happen?

Ask "why" for every human error and every human choice

Saw patient about to fall

No one else to help

Patient high risk for fall and injury

Skipped hand hygiene

Risk of infection

Then: Assess each breach of duty using the Just Culture Algorithm™

Which duty?

A Cause of the Human Error | Behavioral Choice | Human Error

A Cause of the Behavioral Choice | The Undesired Outcome

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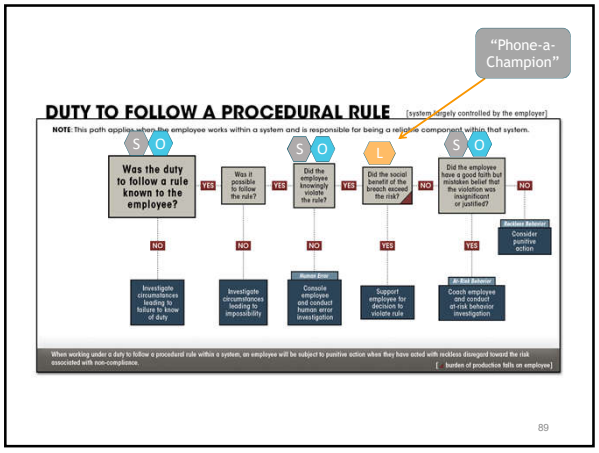

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The nurse quickly rushed across the hall to Patient B's bedside, reaching her just in time to catch her as she tried to stand and began to topple over. The nurse helped Patient B get seated safely on the bed.

Patient B had an open wound on her arm, which the nurse inadvertently came in contact with while assisting her. Patient A was being treated for a severe wound infection. Several days later, Patient B's arm wound became infected with the same organism. Patient B later died as a result of the wound infection.

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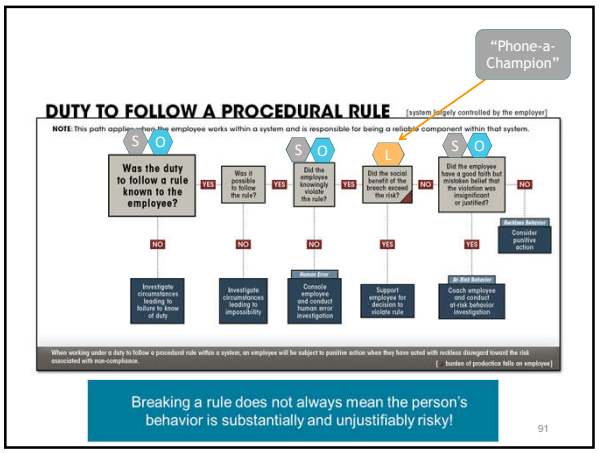

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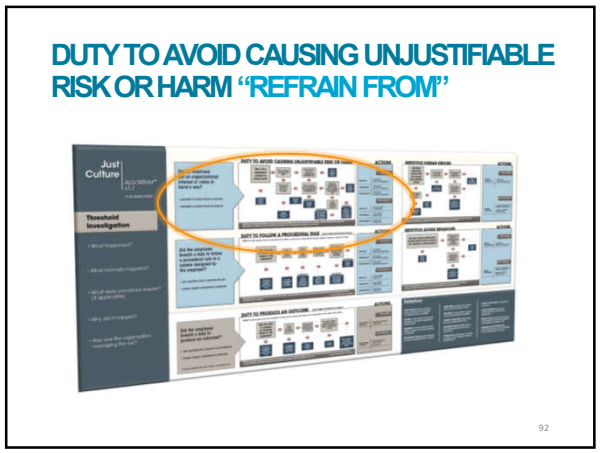

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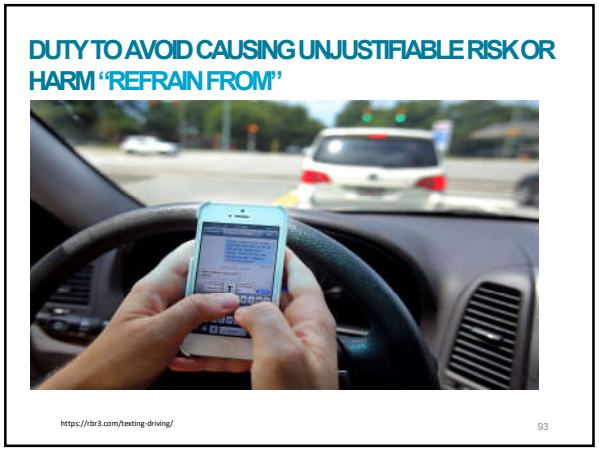

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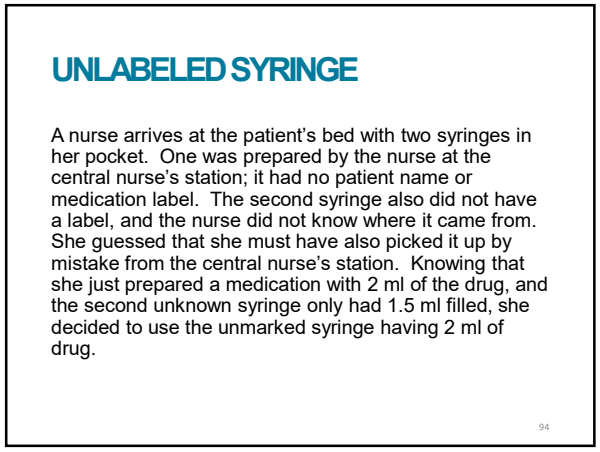

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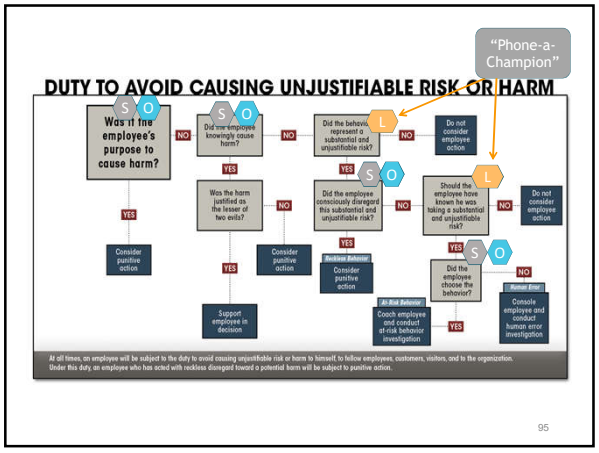

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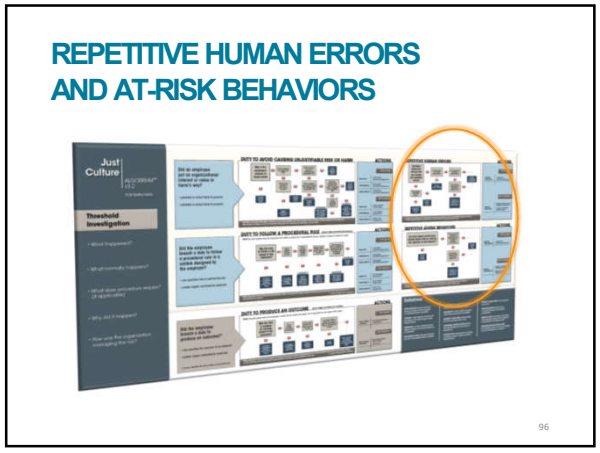

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PHLEBOTOMY

A phlebotomist who formerly worked for a blood bank has worked at the hospital for two months. During this time, she has inadvertently left tourniquets on six patients after completing the blood draw and leaving the room. The tourniquets were all found by patients or nurses. Four of the patients were not injured, one patient had a temporary loss of feeling, and another patient sustained a serious injury.

At the blood bank where the phlebotomist previously worked, the procedure was to use blood pressure cuffs instead of tourniquets and to leave them on patients.

The hospital tourniquets are light blue (same color as the patient gowns). The gown sleeves are long and often cover the tourniquets. There is not a standard number of tourniquets in the blood draw trays each day. The phlebotomist does the majority of the blood draws in the hospital and has to move quickly to complete them on time. The lab gets a lot of negative feedback from physicians when test results are not available for morning rounds.

The laboratory director has reminded the phlebotomist twice that she needs to remember to take the tourniquet off before leaving a room. After the fifth incident, the laboratory director warned the phlebotomist that any more mistakes could result in losing her annual bonus. The phlebotomist's performance at the blood bank was stellar and she came with highest recommendations. In fact, she was a lead member of a major quality improvement project there. She has recommended some process changes to the lab director, such as changing the color of the tourniquets and using a standard number of tourniquets in the trays, but he insists that the process isn't the problem.

The previous phlebotomist that worked for this hospital was terminated for repetitive errors related to leaving tourniquets on patients.

Source: Nebraska Coalition for Patient Safety

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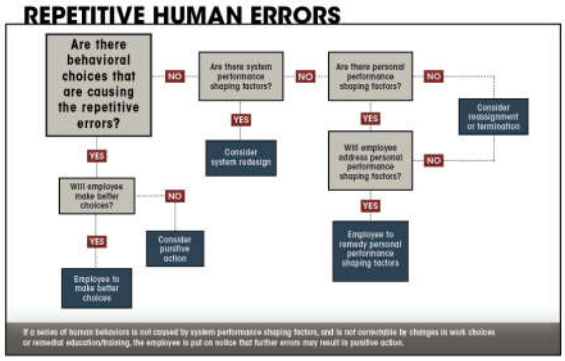

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WRONG MEDICATION

A nurse pulled an IV antibiotic from the automated medication dispensing system for a patient and received an error message when using the barcode scanner on the medication vial. She then scanned the bag of IV solution for the patient and the barcode scanner accepted it.

The nurse had been caring for this same patient for subsequent days and was in a hurry. She had seen similar error message alerts when using the scanner and found they didn't provide much direction. She went ahead and added the IV antibiotic to the IV solution and administered it to the patient. A few minutes later the nurse realized the antibiotic vial was a different color than the one she had used the day before and identified that she had given the wrong antibiotic. She discontinued the IV and reported the error.

This is the third medication error this nurse has had in two months, due to bypassing the barcode scanner. When she was interviewed, she said the barcode scanner is frequently giving error messages.

Other nurses were interviewed about the scanner and agreed that it often gave false error messages, but they normally followed the policy to then have two nurses do an independent double check of the medication and patient before bypassing it and giving the medication.

Source: Nebraska Coalition for Patient Safety

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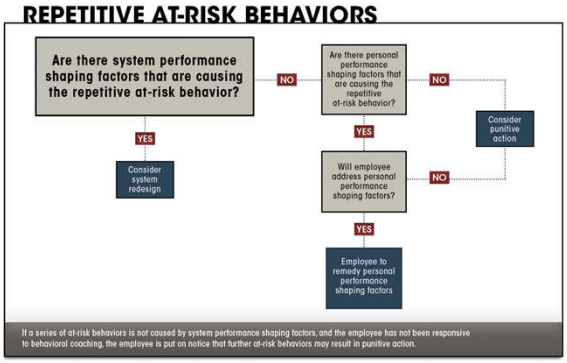

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THRESHOLD INVESTIGATION

How were we managing it?

- Use the investigation as a window to risk
- What did you discover as you searched for causes?
- What was the system design around risk?
  - Reliance on human vigilance?
  - System complexity contributing to workarounds?
  - Performance shaping factors within the system?
  - Competing priorities?
- Event investigation is reactive/retrospective
- **How is our system currently operating related to risk?**

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QUESTIONS?
CONCERNS?
IDEAS?

Use the Just Culture Algorithm to guide your approach to conducting an investigation.
Identify which duty was breached to help you evaluate human error, at-risk, or reckless behavior.
Just Culture balances system and individual accountability.

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SCENARIO PRACTICE

- Discuss your assigned scenario at your table.
- Report out in 15 minutes

1. Complete the threshold investigation (Hint: create a causal diagram)
2. Which duty applies?
3. Is this repetitive human error or repetitive at-risk behavior?
4. What did you learn/your Ahaa! Moment?
5. What difficulty did you have?

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NEXT STEPS: BECOME A PROACTIVE LEARNING CULTURE

Events are not isolated occurrences to be fixed one at a time

Events are opportunities to improve our understanding of risk due to:
- Our system design
- Our behavioral choices

How do we best use our limited resources to minimize the risk of harm, knowing our system is comprised of sometimes faulty equipment, imperfect processes, and fallible human beings?

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HOSPITAL SURVEY ON PATIENT SAFETY CULTURE REVEALS IMPACT ON LEARNING

Changes in HSOPS results pre- to post-collaborative in 10 hospitals who completed just culture training and education

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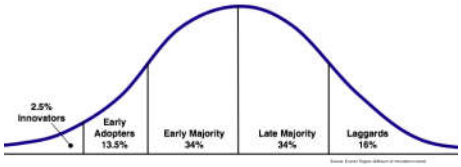
JUST CULTURE AS AN INNOVATION

Getting a new idea adopted, even when it has obvious advantages, is difficult. Many innovations require a lengthy period of many years from the time when they become available to the time when they are widely adopted.



Rogers EM. Diffusion of Innovations (5th ed.). New York, NY: Simon & Schuster; 2003. pp. 1, 281.

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VALUE STATEMENT

INNOVATION

- ✓Is this change a clear advantage over the "old way?"
- ✓Is this change compatible with your existing mission and values?
- ✓Is this change easily understood?
- ✓Is this change "trialable"; can managers try it out and learn by practicing and receiving feedback from peers?"
- ✓Is this change "observable"; can managers see others receiving positive feedback when they use the tools and principles?

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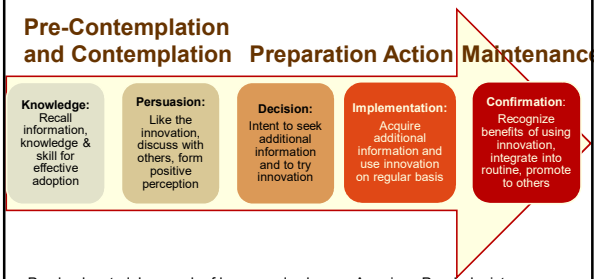
INDIVIDUAL INNOVATION PROCESS



Prochaska et al. In search of how people change. American Psychologist. 47:1102-1114.
Rogers EM. *Diffusion of Innovations.* 5th ed. New York: Free Press; 2003.

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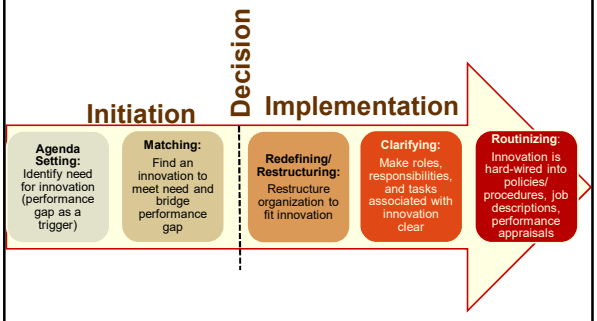
ORGANIZATION INNOVATION PROCESS



Rogers EM. *Diffusion of Innovations.* 5th ed. New York: Free Press; 2003. 109

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IMPLEMENTATION STEPS

- Restructure to support the implementation …
  - ✓Train managers to use tools and principles (NCPS can provide manager training on site)
  - ✓Educate staff regarding how tools and principles will be used
- Clarify roles and responsibilities associated with the implementation…
  - How will manager roles change?
  - Do you need certified Just Culture Champions? (NCPS may host a Champions course in 2020...depending upon interest)
- Routinize the Just Culture principles and tools by changing policy/procedure, job descriptions, performance appraisals

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IMPLEMENTATION BARRIERS AND FACILITATORS

- What barriers have you experienced implementing Just Culture?
  - ✓Didn't clearly identify need?
  - ✓Didn't restructure the organization (e.g. didn't integrate adequately with HR)
  - ✓Didn't clarify roles (e.g. didn't support managers to use the tools and principles as a peer support group)
  - ✓Didn't clarify roles by ensuring staff understand the 3 duties and the 3 behaviors
  - ✓Didn't routinize by integrating use of Just Culture into job descriptions of managers

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IMPLEMENTATION BARRIERS AND FACILITATORS

- What were factors that facilitate your implementation of Just Culture?

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NEXT STEPS…WHO, WHAT, WHEN

- Your organization must decide whether use of the Just Culture principles and tools is how you will focus on risk, system design, and management of behavioral choices and NOT on events, errors, and outcomes
- Each manager has to decide to implement the Just Culture principles and tools; then receive confirmation for their choice
- If these decisions are made, then the organization must:
  - ✓Restructure to support the implementation …
  - ✓Clarify roles and responsibilities associated with the implementation…
  - ✓Routinize the Just Culture principles and tools by changing policy/procedure, job descriptions, performance appraisals

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HSOPS AND JUST CULTURE

Would implementing Just Culture principles and tools...

1. Improve staff perceptions of management's support for patient safety?
2. Improve your ability to analyze and improve systems?
3. Improve your ability to learn from near misses and adverse events?
4. Improve event reporting and feedback and communication about error?
5. Support use of team skills to improve hospital handoffs and transitions?
6. Improve support for those who make human errors and choose at-risk behavior due to system design?

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NEBRASKA COALITION FOR PATIENT SAFETY

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Thank you!

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