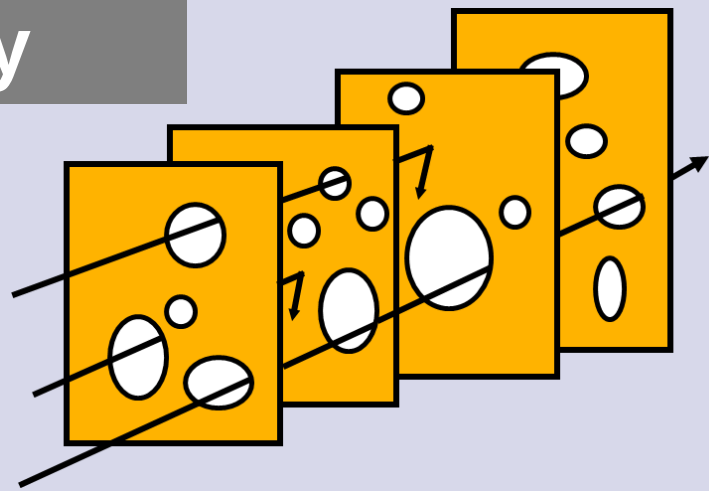
Safety Trends and Interventions: Injury/Incident Data Analysis

Hospital Industry and High Reliability



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Objectives

- **Slips, Trips, and Falls – At A Glance**
- **Definitions and Science**
- **Strategies**
- **Takeaways**

Haddon Matrix

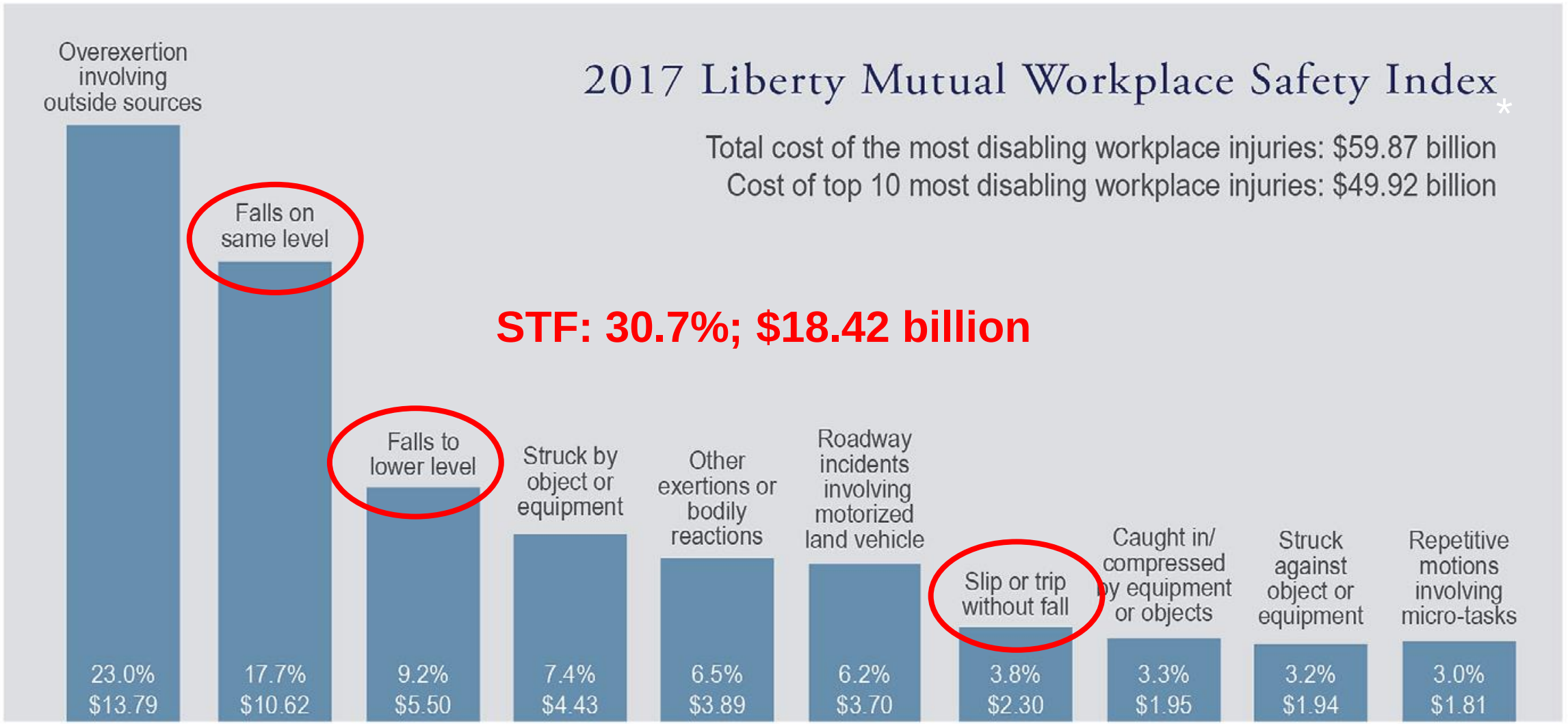
Team Cleanup

Marketing/Communication

HRO – Safety Behaviors

Measurements

Top 10 Causes and Direct Costs of the Most Disabling U.S. Workplace Injuries



- *developed based on data from Liberty Mutual, the U.S. Bureau of Labor Statistics (BLS) and the National Academy of Social Insurance.
- Liberty Mutual examines BLS injury data to determine which events caused employees to miss six or more days of work and then rank those events by total workers compensation costs.

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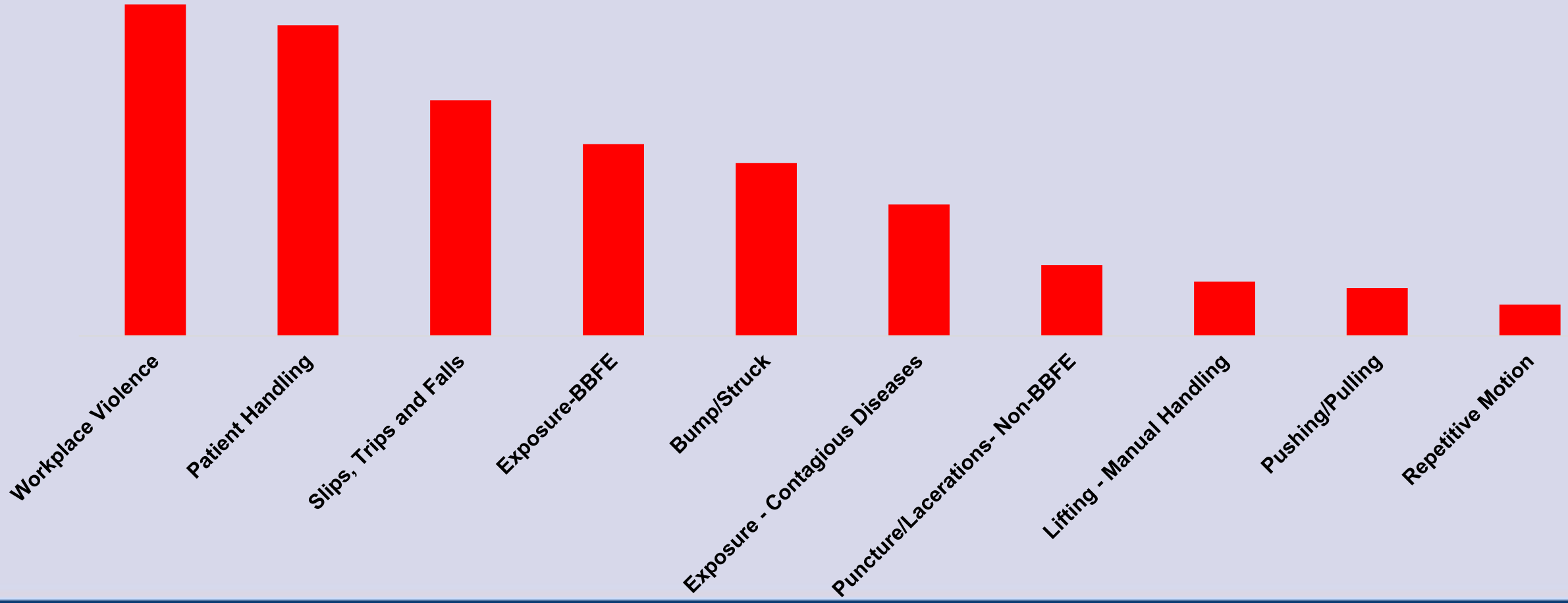
Typical Trend in Healthcare Workers



Falls in Healthcare Workers*

- Over 90% of injured workers were female,
- more than 50% were between the ages of 45 and 64,
- occurred at night as compared to other professions,
- required 30 or more days to recover.

*Yeoh, H., Lockhart, T., & Wu, X. (2013). *Nonfatal occupational falls among U.S. health care workers, 2008-2010*. Workplace Health & Safety, 61(1), 3-8.

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Workforce Safety Strategies

Workout at Providence

- Caregivers (~100) from Different Departments split into 3 groups
  - Patient Handling
  - Slips, Trips and Falls
  - Exposure-Blood and Body Fluids
- Three Group Leaders with One Facilitator as a Support person
- 3 hours of brain storming + one hour of solutions/recommendations:
  - 30 min of presentation
  - Workout: based on **Haddon Matrix** for Injury Analysis and developing Interventions

Haddon Matrix*

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Factors contributing to injury process → ***Phases at which CHANGE would have its effect ↓***	**HOST**	**AGENT/VEHICLE**	**ENVIRONMENT**
	• Person at risk for an injury	• Energy that is transmitted to the host through a vehicle (inanimate object) OR vector (person or animal) • That is causing energy transfer	• Characteristics of the setting in which the injury event takes place (e.g., roadway, playground) • Social and legal norms and practices (e.g., policies)
Pre-Event			
Event			
Post-Event			

**Dr William Haddon, First Director of NHTSA*

Haddon Matrix

Factors contributing to injury process → / *Phases at which CHANGE would have its effect* ↓	HOST	AGENT/VEHICLE	ENVIRONMENT Physical and/or Social
Pre-Event (time frame – Seconds to Years)	• Conditions necessary for the transfer of energy • What leads to an injury? • **Time before the event occurs OR the period before release of injury-causing energy** • (What are) Events that influence likelihood of an injury		**PRIMARY Intervention**
Event (time frame – Fraction of Second to Minutes)	• Given the Event occurrence, what leads to an injury • Release of uncontrolled energy • Events affect transmission of energy		**SECONDARY Intervention**
Post-Event (time frame – Seconds to Years)	• Period after injury		**TERTIARY Intervention (to lessen long-term adverse effects)**

Few Narratives

- I **didn't know floor was wet in the clean utility**. There was a **wet floor sign in the hallway** by the utility door **but nothing inside the utility room ..**so i didn't really expect that the utility room floor just got mopped. I thought it was the **hallway floor since the sign was in the hall**…..
- Moving to foot of the bed to **remove excess covers** from patient. I got **caught on cord** from auto bp machine.....
- **Starting to sit down in a rolling desk chair** to run the end of shift report, it **rolled sideways and i fell down**. …**hitting my head, ear, shoulder and neck**, while landing hard on my butt….




An Example

	EMPLOYEE	AGENT	Physical - ENVIRONMENT - Organiz/Social	
Pre-Event	• Gender • Age • Height • Prior History of falls • **Distracted**	• Type of shoe (e.g., shoes, crocs)	• Floor type/condition (wet, just scrubbed, dry, ..) • Room (clean utility, soiled, bathroom,..) • Wet floor signs	• Shift • Staffing • Housekeeping • Safety culture
Event	• Overlooked the wet floor sign while entering the Clean utility room	• **Shoe stuck on the floor** • **Non-slip resistant shoe and shoe condition**	• Greasy floor • Wet floor • Contaminants on the floor	• Night shift • Short staffed
Post-Event	• First Aid • Fracture • Rehabilitation	• Wear proper shoes	• Wet Floor signs at proper locations • Wet Floor signs visibility • Use of proper lights	• Revise Fall Prevention Policy • Reinforce policies during Skills Fair/ Safety Huddles (everyday) • Communication with Housekeeping

Walking and Distraction??

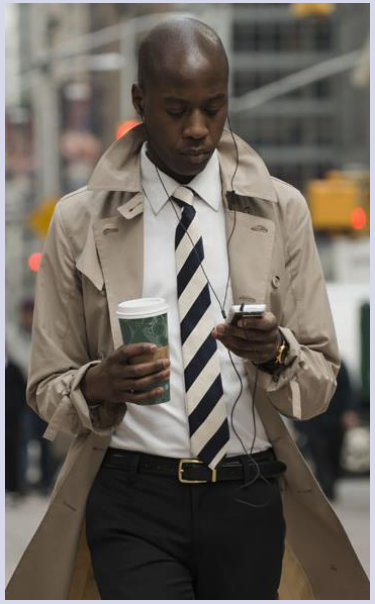
- No witnesses to the incident. Employee was **walking from the parking garage** to the pavilion **via the outside stairs**. The day was **dry** and there were no hazards per the employee that caused her to **roll her ankle which led her to fall** down the steps.

- **Walking down the hallway** and hit a slippery spot. Lost footing, fell hard on my knees. **No water was seen**, but slick spot was felt on floor.

- I was walking **from the employee overflow parking lot** into the hospital; The **parking lot was very slick**, so I was careful to walk slowly. I crossed the street and **as soon as I reached the sidewalk it became so slippery** that I was unable to maintain my footing and I fell forward.

We are addicted to Distraction

- No human can truly multitask!



- When we are interrupted during a task it takes an average of 23 minutes and 15 seconds to regain focus (UC Irvine study).

- A distraction of just 2.8 seconds doubles the likelihood of an error.

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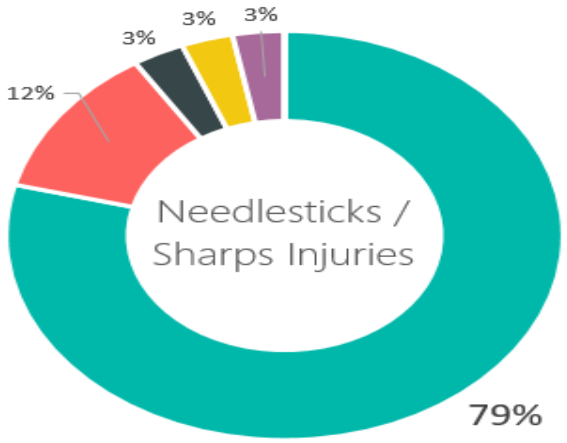
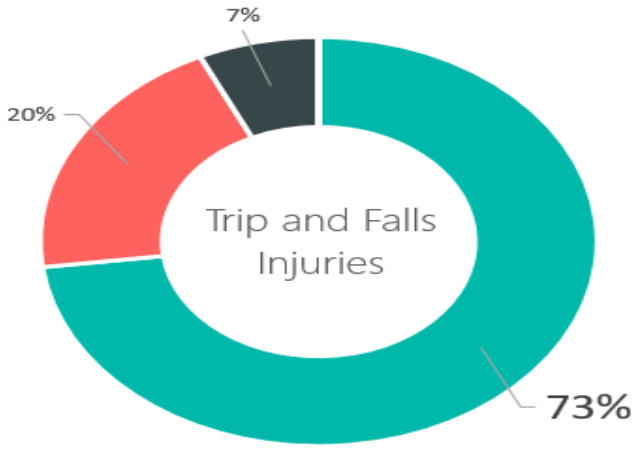
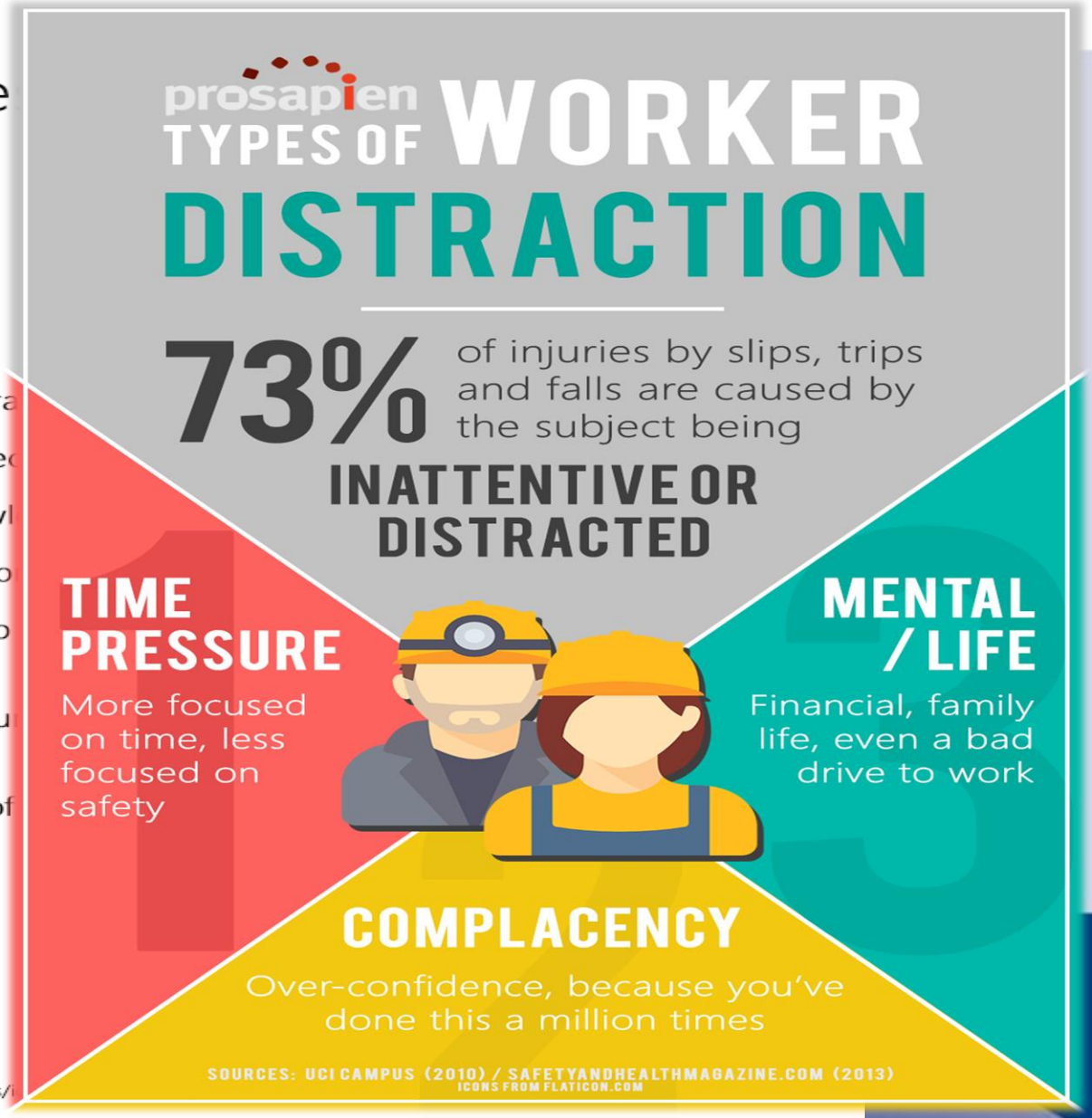
UCI Campus 2010 Injury Inve





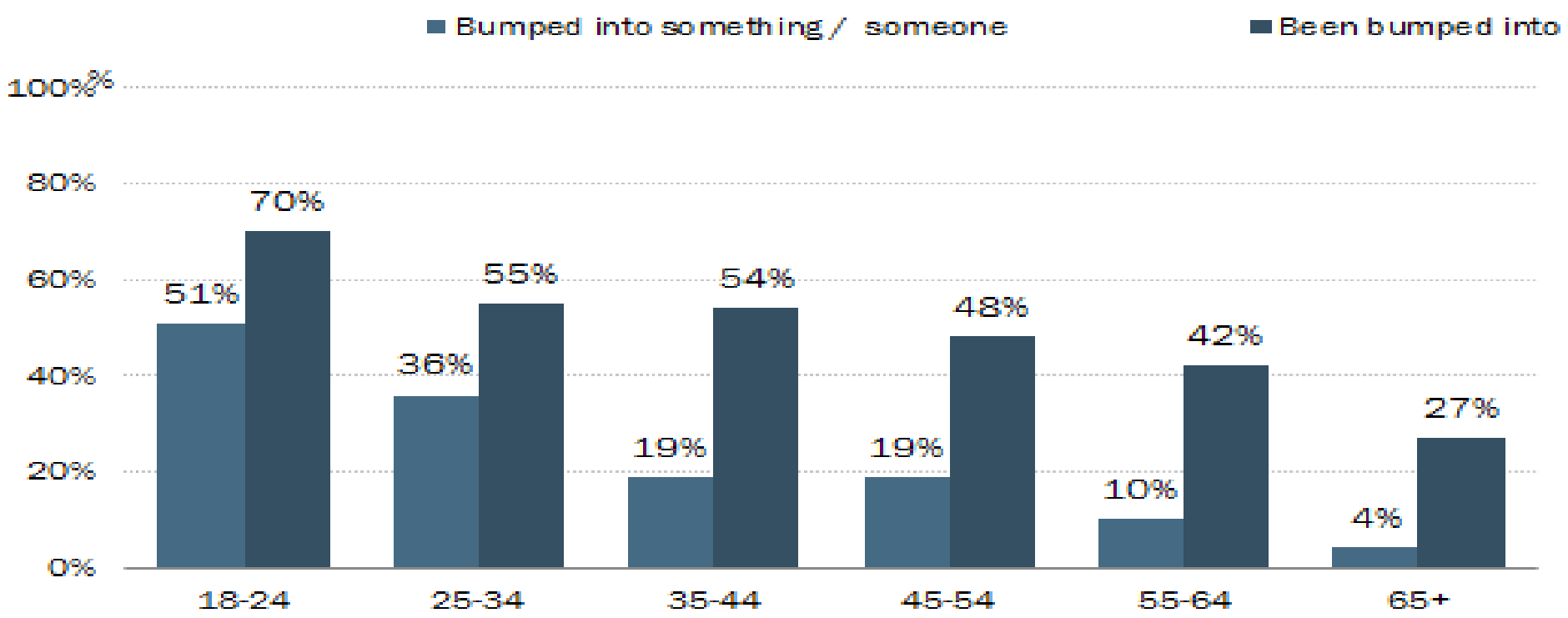
- Subject Inattentive / Distra
- Proper Procedures Ignore
- Inadequate Skills or Knowl
- Inadequate Tools or Equip
- Lack of or Inadequate Job Procedures
- Management Lacks Resou / Funding
- Lack of Communication of Expectations

Source: University of California (2010) Available at: http://sites.uci.edu/mindfulhs/



Watch where you're going

% of cell owners in each age group who have bumped into something or been bumped into by others who were distracted by their phones



Source, Pew Research Center's Internet Project Survey, March 15-April 3, 2012. N=1,954 adult cell owners age 18 and older. Margin of error is +/-2.6 percentage points.

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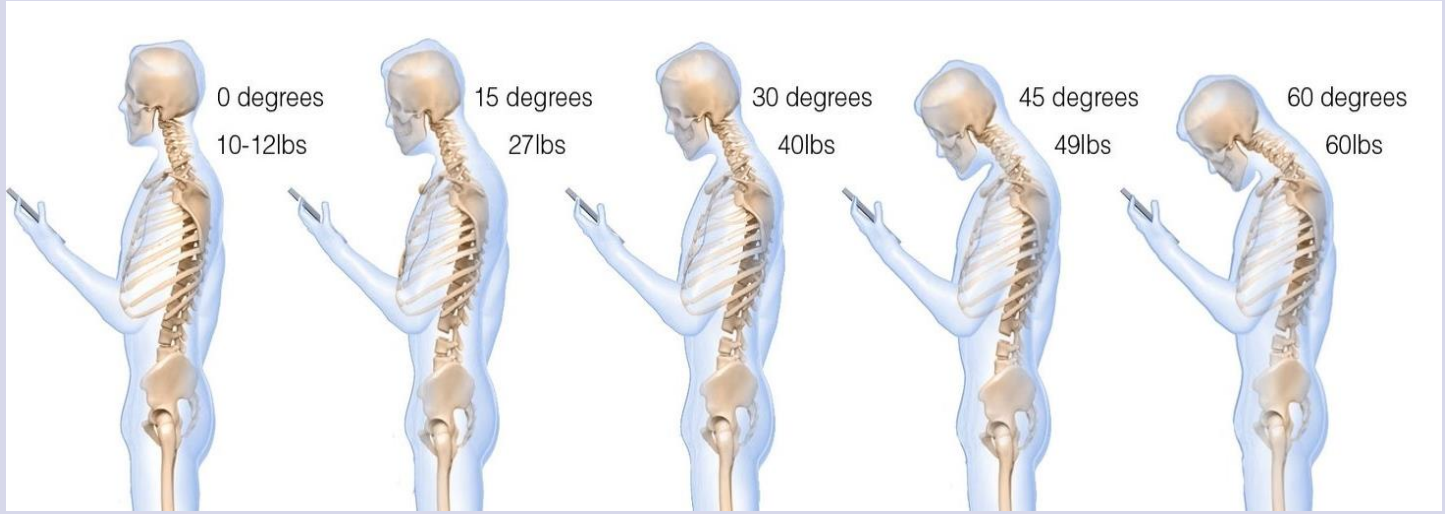
In addition to distraction,

- Tilting the head down and forward (even slightly as you look at the smartphone screen) can put as much as 60 pounds of stress on our neck and spine*.

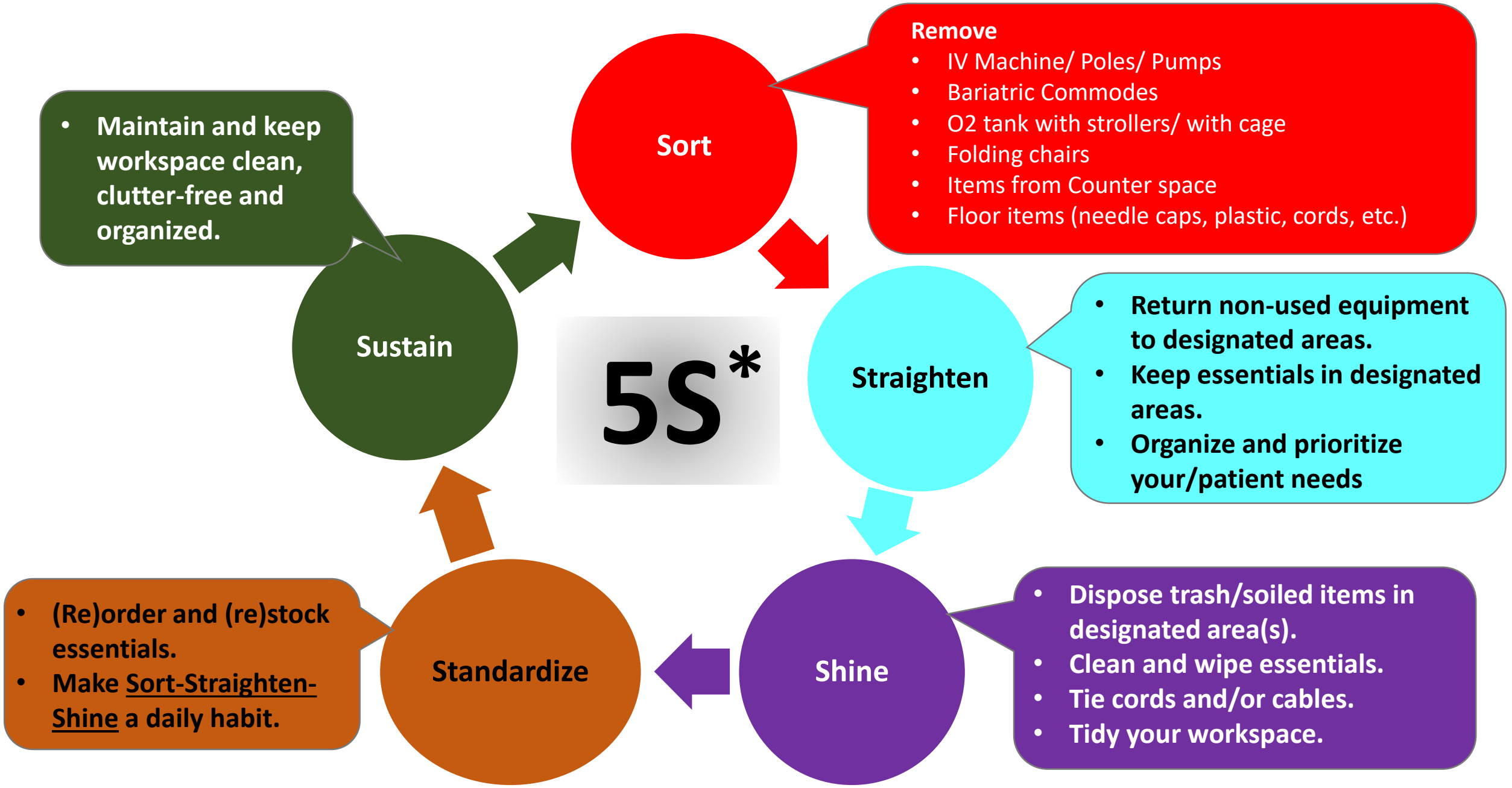


- **Forward head tilt + texting/talking + Walking???**

*Dr. Kenneth K. Hansraj, Chief of Spine Surgery, New York Spine Surgery & Rehabilitation Medicine

Workout Recommendations

- Team Cleanup
- Safety Ambassador/Safety Pledge
- Cord Management Task Force
- Service Operations Center Marketing/Education
- Curb painting



*from ***Kaizen Philosophy*** and **CAN-DO** (**C**learing Up, **A**rranging, **N**eatness, **D**iscipline, **O**ngoing improvement) of ***Henry Ford – Lean Vision***

Help reduce caregiver injury:

Keep your head up in the hallways

Avoid multi-tasking when possible

Pay attention to what's around you

Nature does not hurry, yet everything gets accomplished.

-Lao Tzu

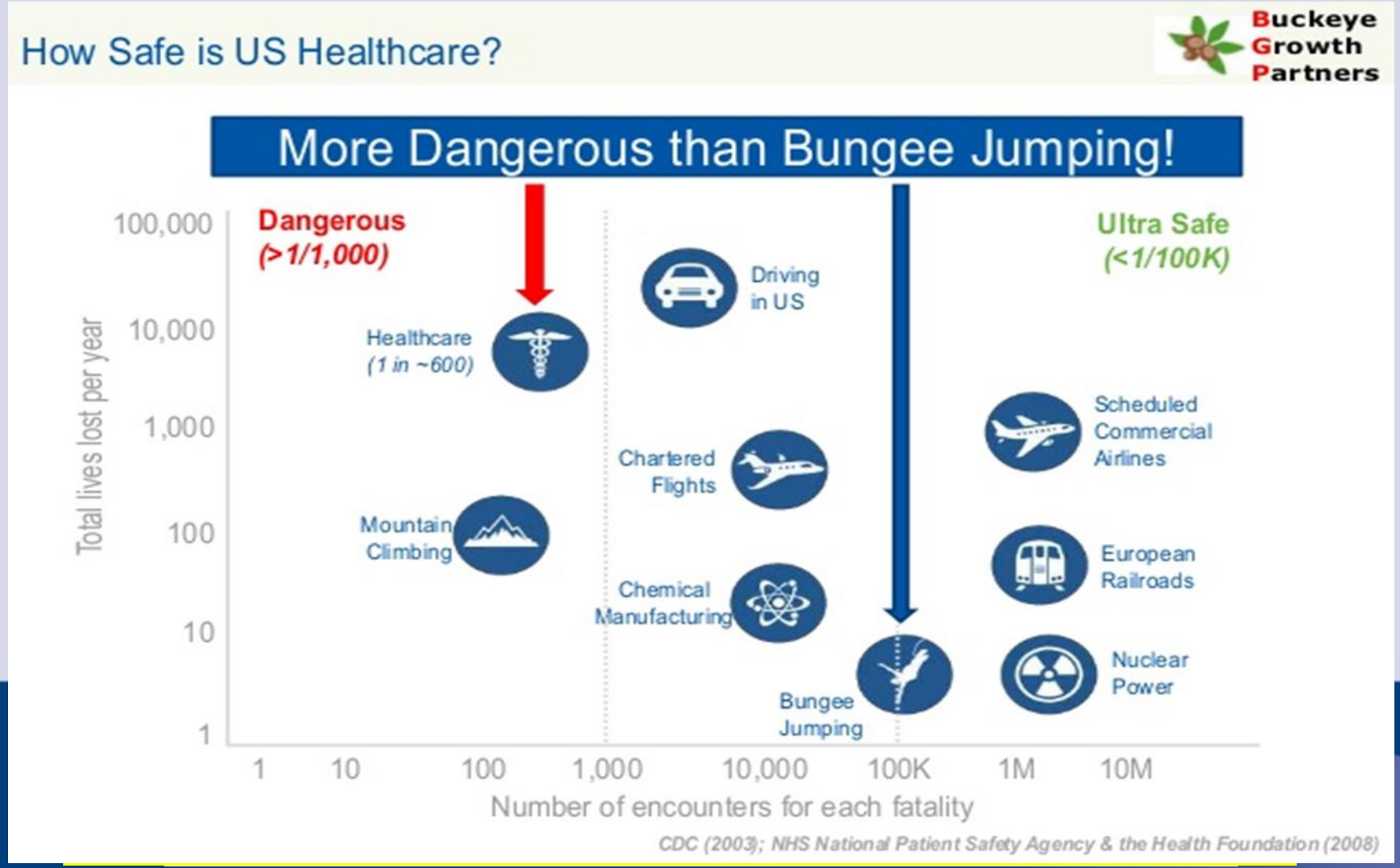
High Reliability Organizations (HROs)

- systems operating in hazardous conditions that have fewer than their fair share of adverse events.

- “preoccupation” with the possibility of failure.

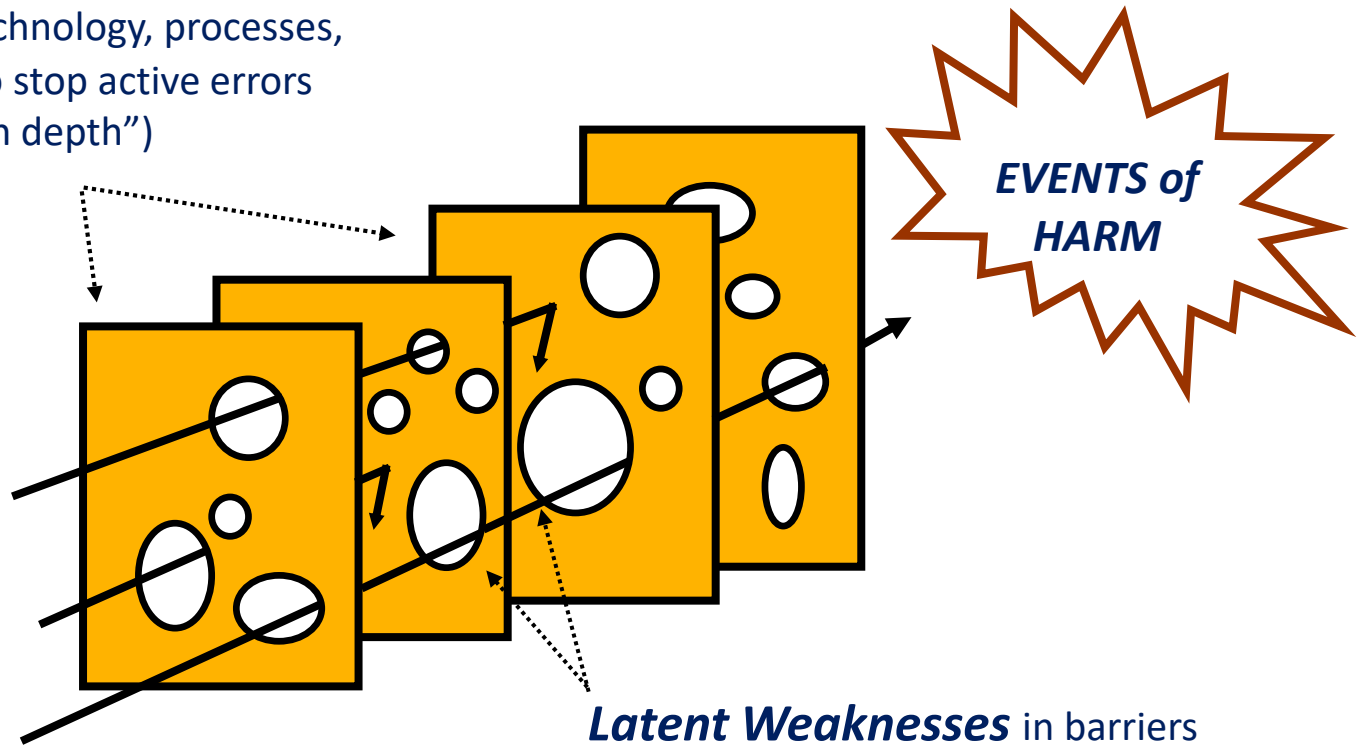
- HROs value identifying and reporting potential and actual problems, and treat adverse occurrences as opportunities for learning and improvement.

Hospital Industry - Potential for Catastrophe?



Anatomy of a safety event

Multiple Barriers - technology, processes, and people - designed to stop active errors (our "defense in depth")



Active Errors by individuals result in initiating action(s)

Latent Weaknesses in barriers

PREVENT

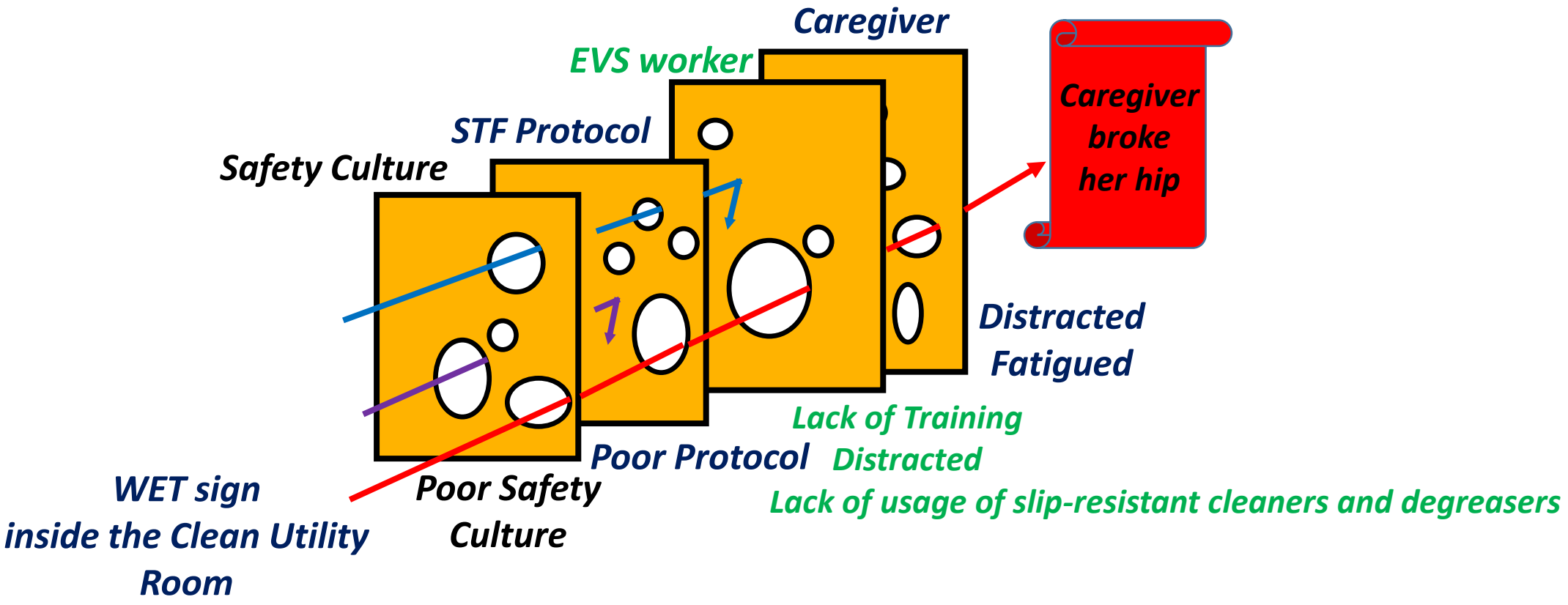
The errors

DETECT & CORRECT

The system weaknesses

From James Reason, *Managing the Risks of Organizational Accidents*, 1997

Caregiver slipped and broke her hip!



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Safety Behaviors

PROVIDENCE Health & Services

Toolbox for everyone

With our collective commitment to safety and reliability, we serve our mission and achieve our vision.

Our Mission
As people of Providence, we reveal God's love for all, especially the poor and vulnerable, through our compassionate service.

Our Vision
Together, we answer the call of every person we serve:
Know me, Care for me, Ease my way®

Core Values
Respect, Compassion, Justice, Excellence, Stewardship

CARING RELIABLY
Be Compassionate. Be Safe. Be Reliable.

Tones for respect of others at all time

Smile and greet others; say "Hello"	Introduce using preferred names and explain roles	Listen with empathy and intent to understand	Communicate positive intent of our actions	Provide opportunities for others to ask questions

Universal behaviors and tools

PAY ATTENTION TO DETAIL
- Self-check using STAR (Stop, Think, Act, Review)
- Peer check

COMMUNICATE CLEARLY
- SBAR (Situation, Background, Assessment, Recommendation)
- Three-way repeat-back and read-back
- Phonetic and numeric clarification
- Clarifying questions

HAVE A QUESTIONING ATTITUDE
- Validate and verify
- Know why and comply

OPERATE AS A TEAM
- Brief, execute, and debrief

SPEAK-UP FOR SAFETY
- Escalation using CUS (Concerned, Uncomfortable, Stop) and Chain of Command
- Event reporting systems (UOR)

COMTS-20213

Pay Attention to Detail

Communicate Clearly

Have a Questioning Attitude

Operate as a Team

Speak-up for Safety

Critical success elements include: leadership behavior, safety culture, and continuous process improvement capability.

HROs: Win-Win Formula

Intervention Focus	Examples of Strategies	Settings	Potential Benefits to Patients	Potential Benefits to Employees	Potential Benefits to Organization
Fall Prevention	Patient Assessment; Safe patient handling; Slip resistant flooring materials; Absorbent floor mats; Lighting Proper Housekeeping	Acute Care hospitals; Rehabilitation facilities; Skilled Nursing Facilities	Decreased morbidity and mortality; Length of stay	Fewer injuries and days away or restricted work; Increased worker satisfaction	Decreased worker compensation costs; Decreased litigation; Decreased staff replacement

The Joint Commission. Improving Patient and Worker Safety: Opportunities for Synergy, Collaboration and Innovation. Oakbrook Terrace, IL: The Joint Commission, Nov 2012.

Takeaways

- Injuries are predictable and preventable.
- Specific injuries have similar characteristics of: person, place, and time.
- By understanding an injury (mechanism), interventions can be developed and implemented to prevent or limit the extent of a given injury!

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Thank You

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