Patient Safety Science and Psychological Safety in Veterinary Medicine

CVMA
October 18, 2024

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Global VP of Patient Safety and Quality

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AGENDA

What is Patient Safety?

Value of Patient Safety Data

Systems-Approach + Culture of Safety

Impact of Patient Safety Events

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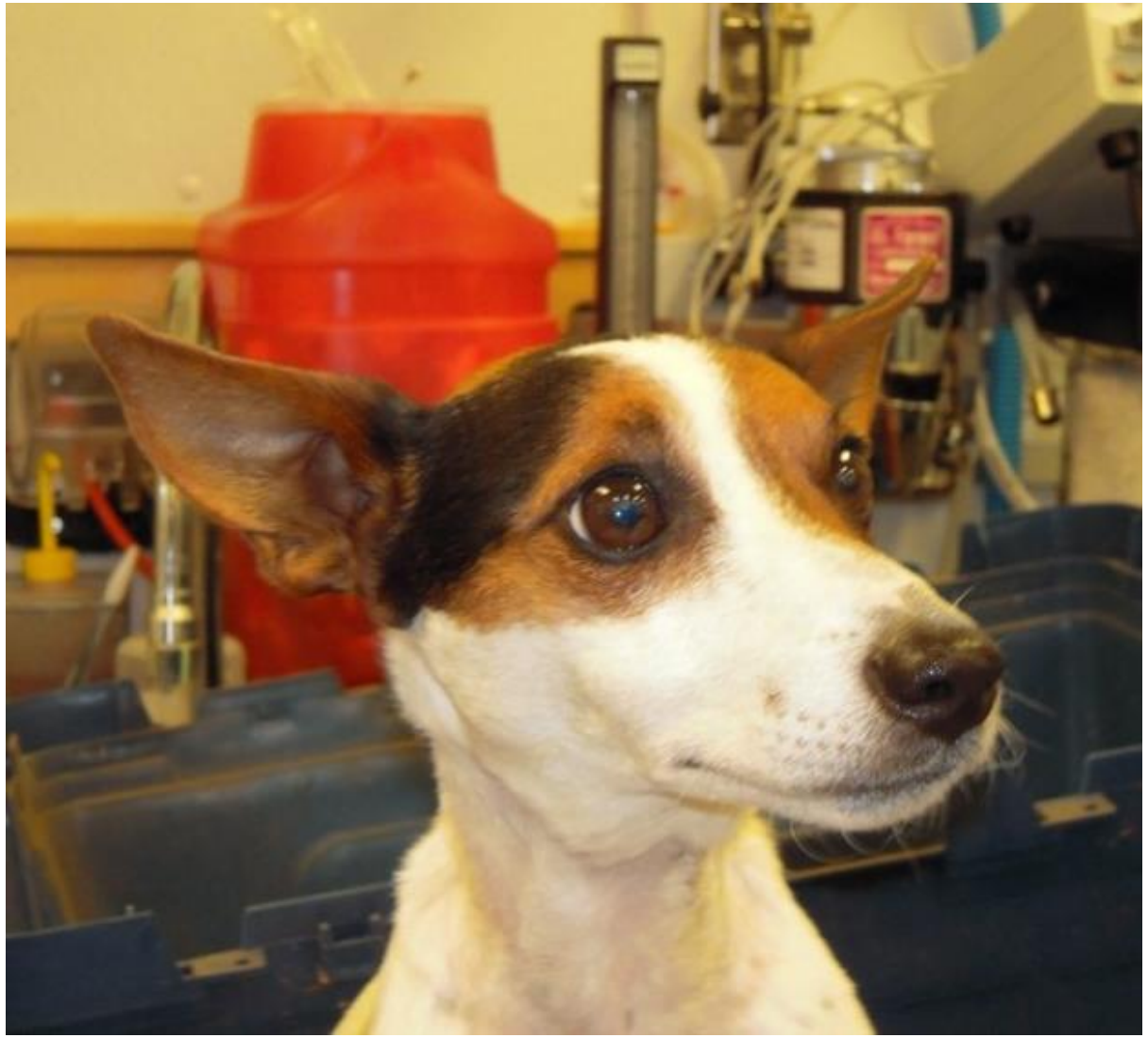
Banks



4-year-old Jack Russell Terrier

Head trauma
Splenic laceration
Diaphragmatic hernia
Multiple fractures

Multiple transfusions
Two emergency surgeries

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Banks

1
CT scan

3
blood transfusions

2
emergency surgeries

9
days spent in the ICU

Patient safety is an applied science that involves systematic study of errors and the rigorous design and testing of change interventions

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What is a Patient Safety Event?

Harm or potential harm caused by medical management / treatment rather than the underlying condition of the patient

The patterns of error in healthcare are no different from the situations that exist in other high-risk industries

What is different in healthcare is that there still remains an element of a culture of infallibility that denies the prevalence of error

Medical Error is a complex issue, but error itself is an inevitable part of being human

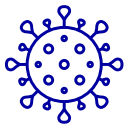
PATIENT SAFETY IN HUMANS

33.6 MILLION
admissions to U.S. hospitals

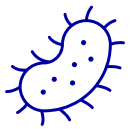
44K – 98K
Americans die in hospitals each year as a result of medical errors

EXCEEDED THE DEATHS ATTRIBUTABLE TO:

43,458
Motor vehicle accidents



42,297
Breast cancer



16,516
AIDS

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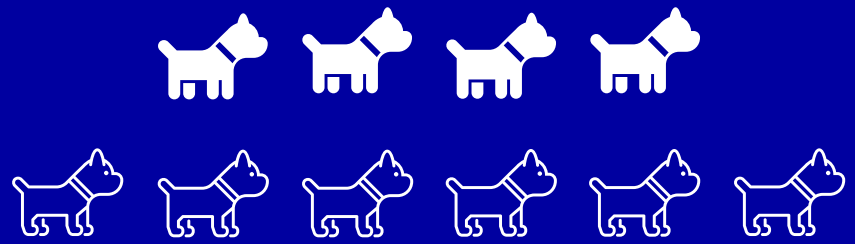
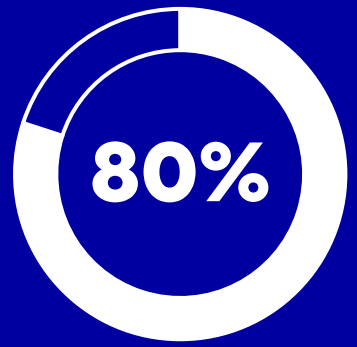
Source: Agency for Healthcare Research and Quality (AHRQ) www.ahrq.gov



Globally, 4 in 10 patients are harmed in primary and outpatient care

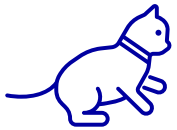


Up to 80% of these are preventable

Source: World Health Organization (WHO) Patient Safety www.who.int

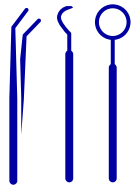
SAMPLE MEDICAL ERRORS

Many patient safety events are PREVENTABLE

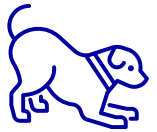


Administration of 6mls of Ketamine to a cat as induction agent

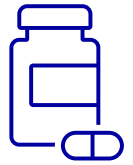
Cefazolin given epidurally



2-year-old dog presented for mass removal. Accidently performed neuter.



4-year-old Westie with burn from patient warming device



Patient sent home with wrong insulin dose

TOP PATIENT SAFETY EVENT CATEGORIES

HUMAN MED vs. VET MED

HUMAN MEDICINE:

1. Medication error
2. Hospital Acquired Infection
3. Surgical Errors
4. Diagnostic Errors

VETERINARY MEDICINE:

1. Medication Error
2. Patient Care + Handling
3. Anesthesia
4. Surgery + Procedures

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Source: World Health Organization (WHO) Patient Safety www.who.int + Halo system MVH

Why do Errors Happen?

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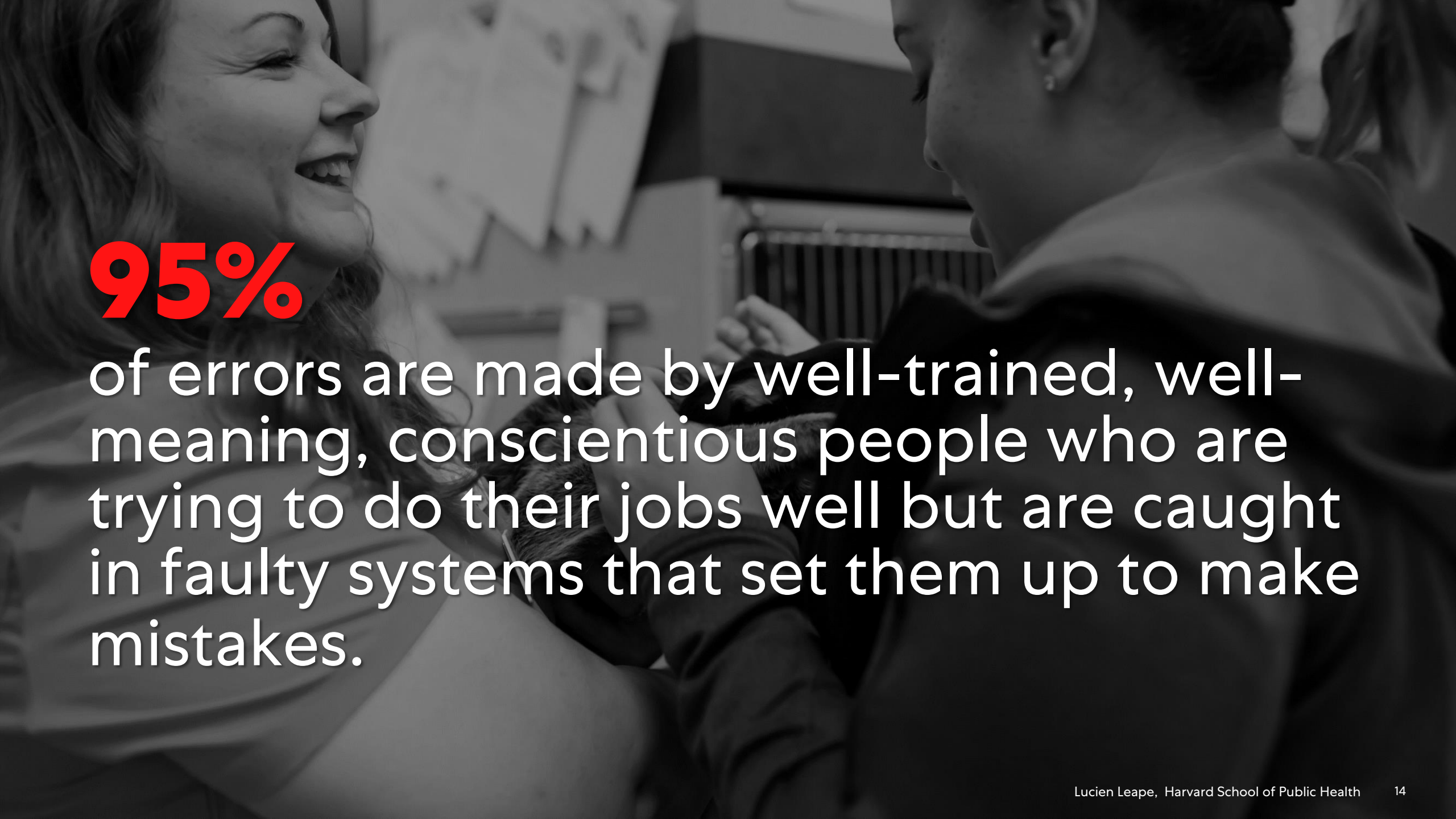
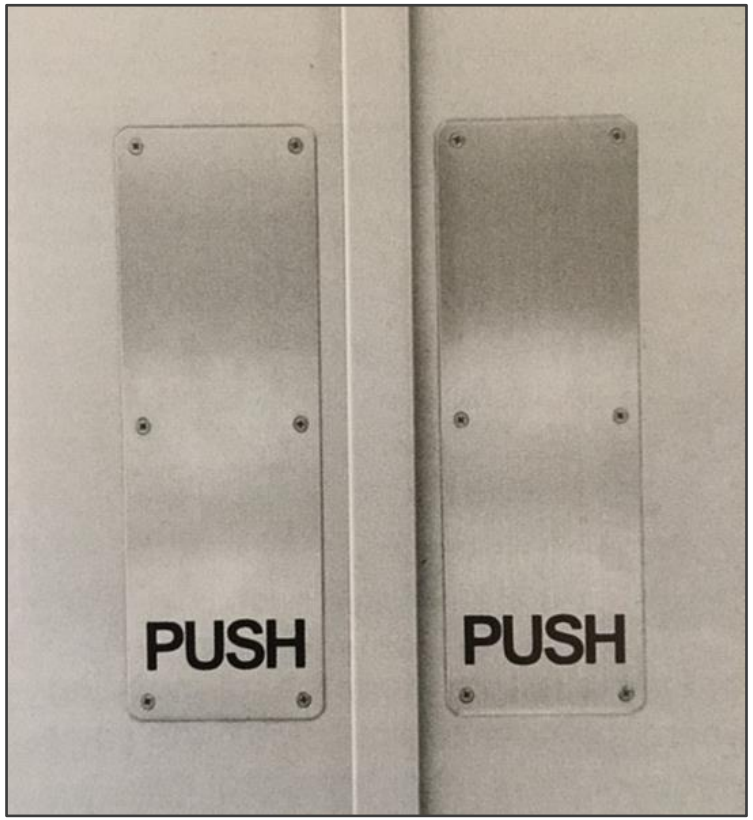
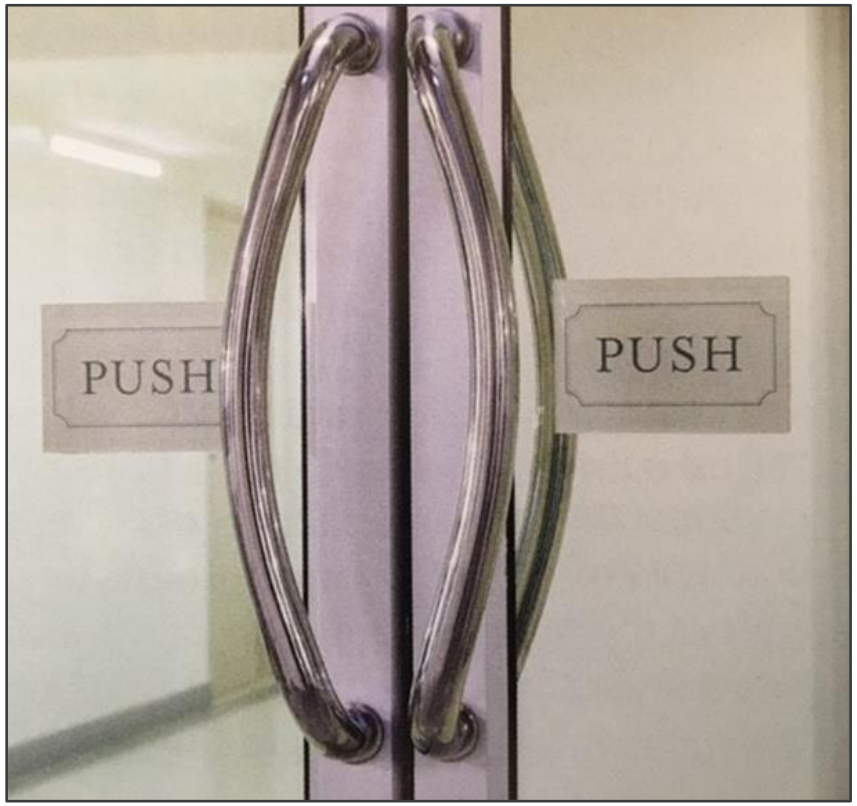


95%

of errors are made by well-trained, well-meaning, conscientious people who are trying to do their jobs well but are caught in faulty systems that set them up to make mistakes.





COULD THIS BE A PROBLEM?

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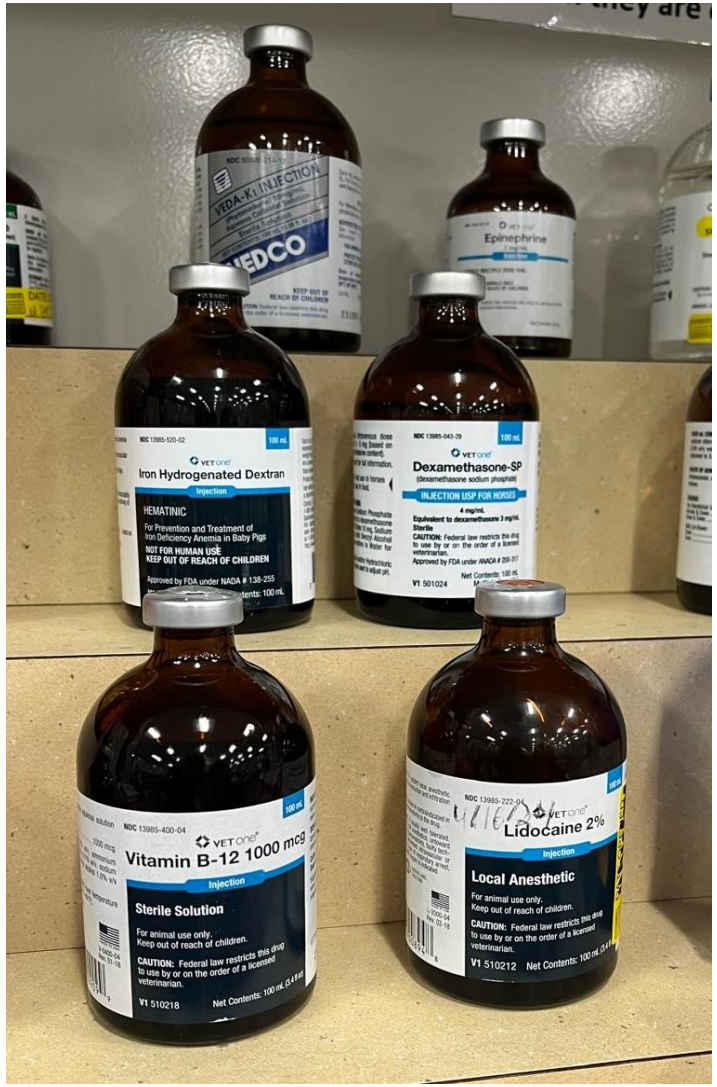
Look-Alike Sound-Alike: 'LASA' Drugs

Cerenia®
maropitant citrate

convenia®
cefovecin sodium



What is a System?

- Making a cup of coffee
- Driving a car
- Taking a blood sample
- Clinical handover
- Managing test results
- Running a hospital ward
- Veterinary practice

A set of interconnected components organised for a purpose

Types of Systems

Simple

- Recipe for baking a cake

Complicated

- Engine

Complex

- Veterinary care

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WHAT IS A SYSTEMS-BASED APPROACH TO ERROR?

WHERE ARE THE WEAKNESSES IN THE SYSTEM?

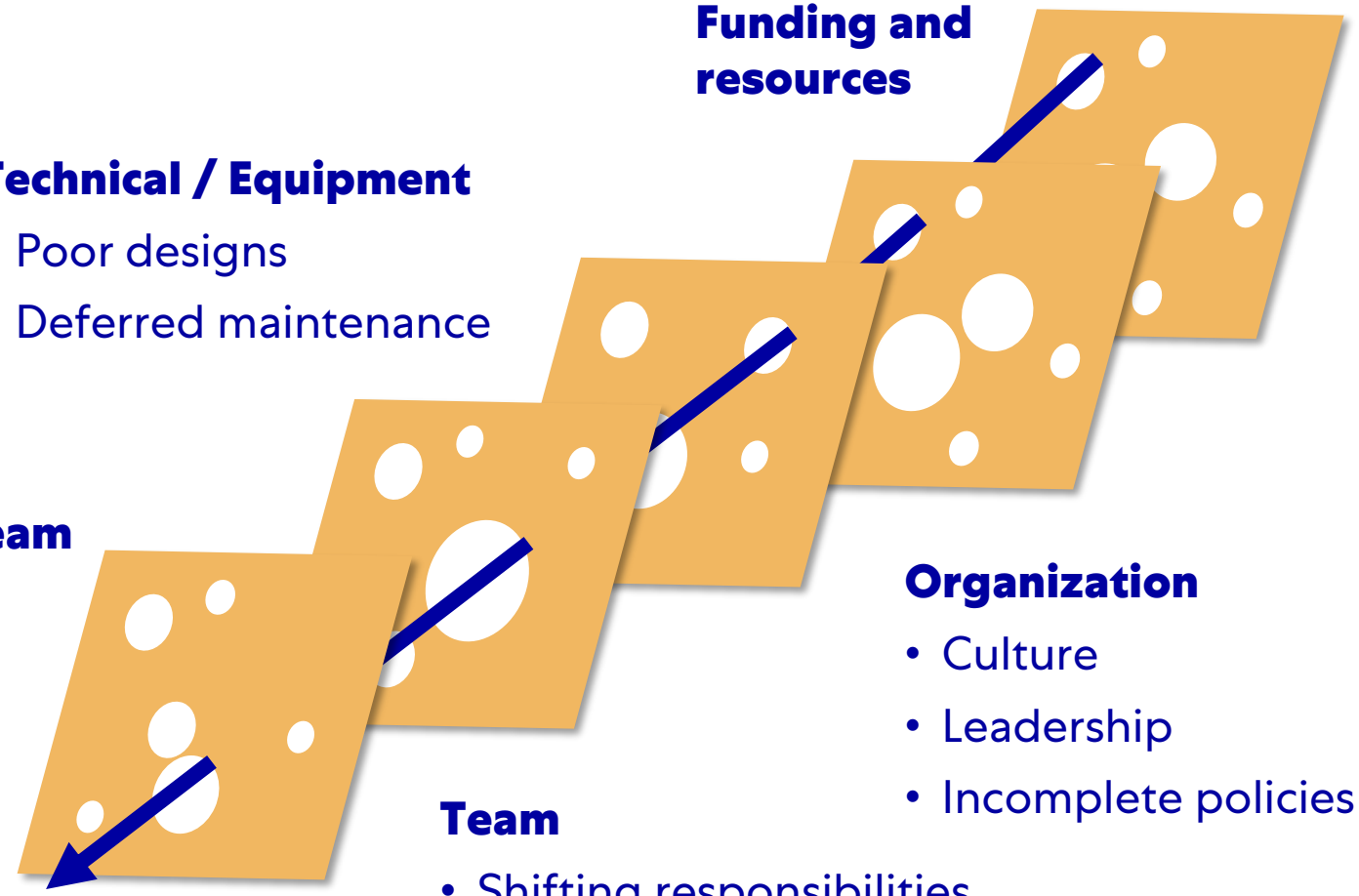
1. All systems and processes can fail
2. Focus on finding and fixing unsafe conditions before injury happens
3. Errors most often due to a complex series of events, not a single event

If the system lets you make the error, it is badly designed. And if the system induces you to make the error, then it is REALLY badly designed.

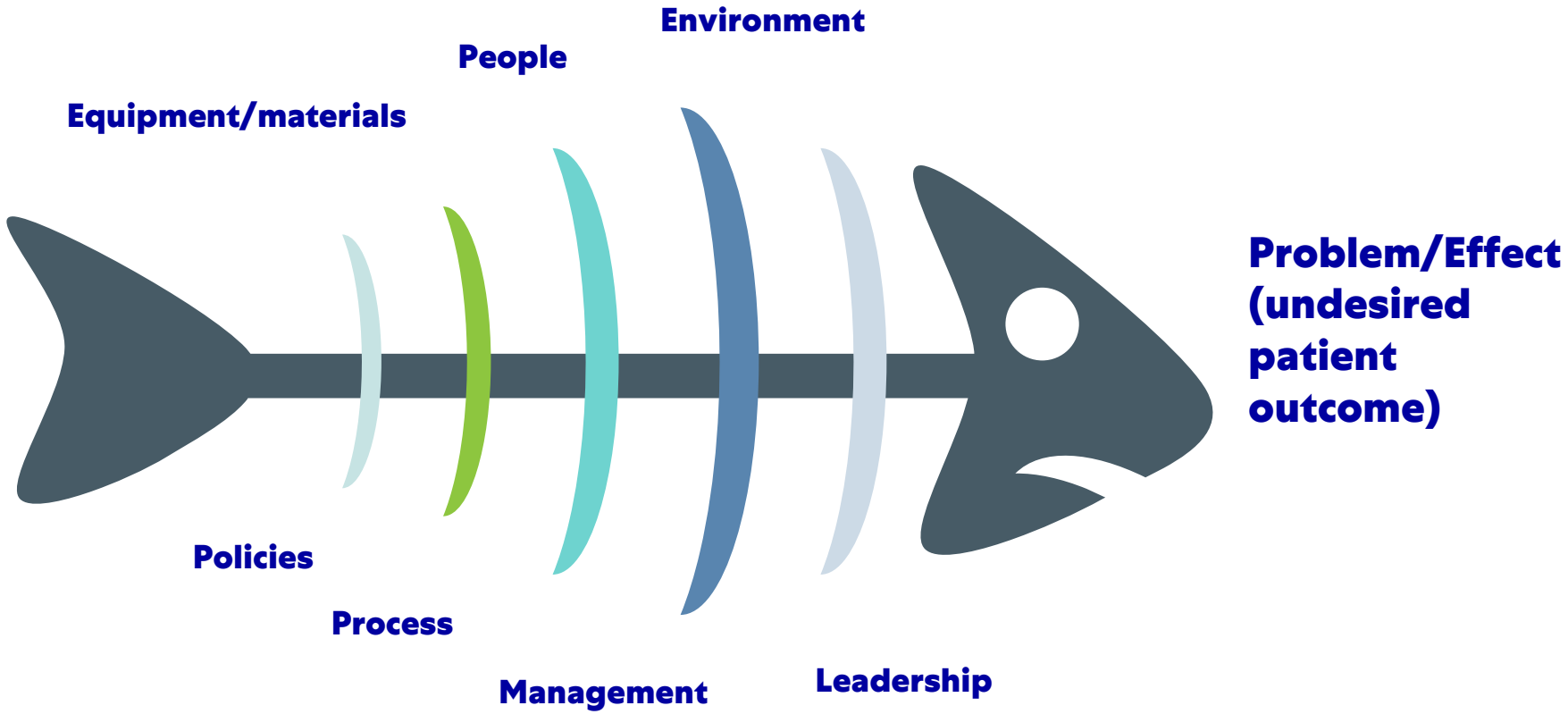
Don Norman, IHI

SWISS CHEESE MODEL OF ERROR

by Jim Reason



FISHBONE DIAGRAM: ROOT CAUSE ANALYSIS



by Kaoru Ishikawa

What is HUMAN-FACTORS?

The interrelationship between individuals at work, their equipment and tools, and the environment in which they live and work

3 domains:

1. Physical (workplace layout)
2. Cognitive (mental processes)
3. Organizational (communication and teamwork)

Human Factors

The study of all the factors that make it easier to do the work the right way

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Human Factors Aims

Human Factors

- Improved system performance
- Optimised human wellbeing

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Where does this fit into understanding patient safety events and Culture of Safety?

People do what makes sense at the time. Try to put yourself in their shoes. **Why did they do what they did?**

What features of the task, job, equipment, environment or system **made the event more likely to happen?**

Where could changes make the system more compatible with the needs, capabilities and limitations of people?

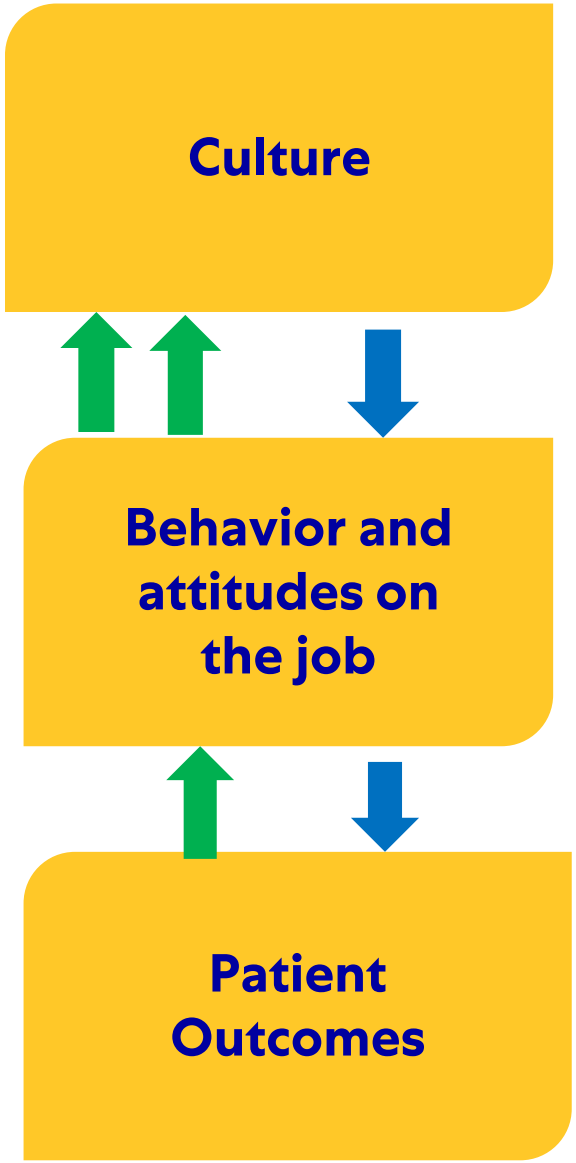
Defining a Culture of Safety

Shared values, beliefs, norms related to safety. It is the compass team members use to guide their behaviors, attitudes and perceptions on the job.

What will I get praised for?

What will I get reprimanded for?

What is the “right” thing to do?



Psychological Safety

Psychological safety is the individual confidence that speaking up will not result in embarrassment, rejection, criticism, or punishment from others.

Strong psychological safety has been linked to less burn out in caretakers

Ref: Ma Y *et al*.
J Nurs Manag. 2021

A strong Culture of Safety supports Psychological Safety as all team members, regardless of position or rank, have a voice. Psychological safety helps flatten power dynamics that, when present, have been shown to lead to adverse events in healthcare.

Why a Culture of Safety matters

Safety culture is related to outcomes

Patient Outcomes

- Patient care experience
- Infection rates
- Sepsis
- Post-op hemorrhage
- Respiratory failure
- Treatment errors

Clinician Outcomes

- Incident reporting
- Burnout
- Engagement
- Turnover

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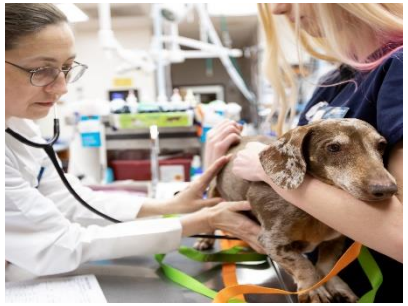
Ref:Huang et al., 2010; Mardon et al., 2010; MacDavitt et al., 2007; Singer et al., 2009; Sorra et al; 2012; Weaver, 2011

Key Qualities of a Strong Culture of Safety

People are comfortable speaking up, asking for help and reporting errors

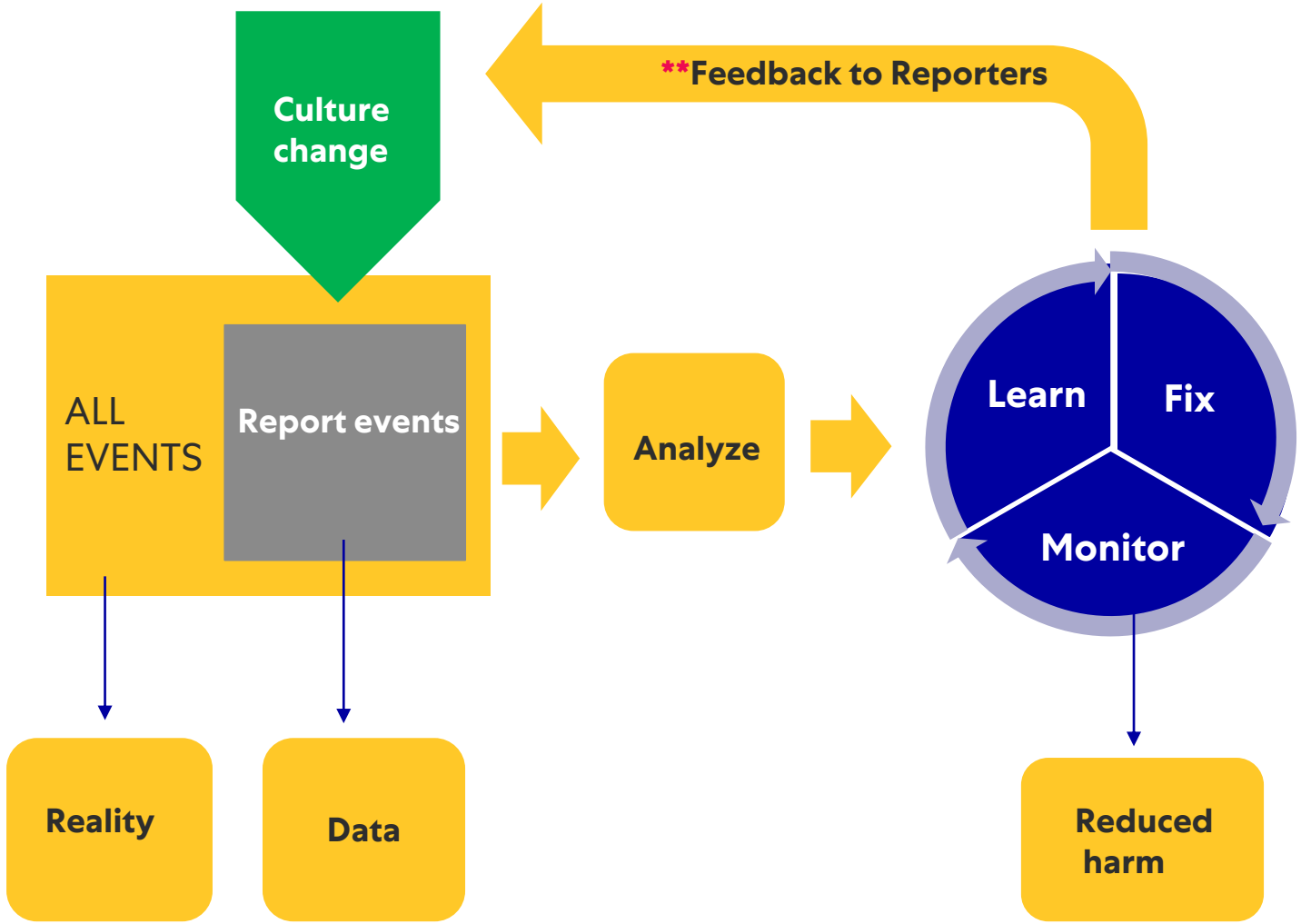
An environment where it is safe to learn, grow and ask questions



People are supported when things go wrong. Culture is non-judgmental and non-punitive

Errors/events are dissected and discussed in order to prevent future errors

How PSE's can drive safety and culture



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Measurement of CoS

Safety climate survey Johns Hopkins

1. I would feel safe being treated here as a patient.

2. Medical errors are handled appropriately in this work setting.

3. I know the proper channels to direct questions regarding patient safety in this work setting.

4. I am encouraged by others in this work setting to report any patient safety concerns I may have.

5. The culture in this work setting makes it easy to learn from others.

Key dimensions: teamwork, communication, leader commitment, response to errors, overall assessment of safety

Response rates >60% needed; debrief

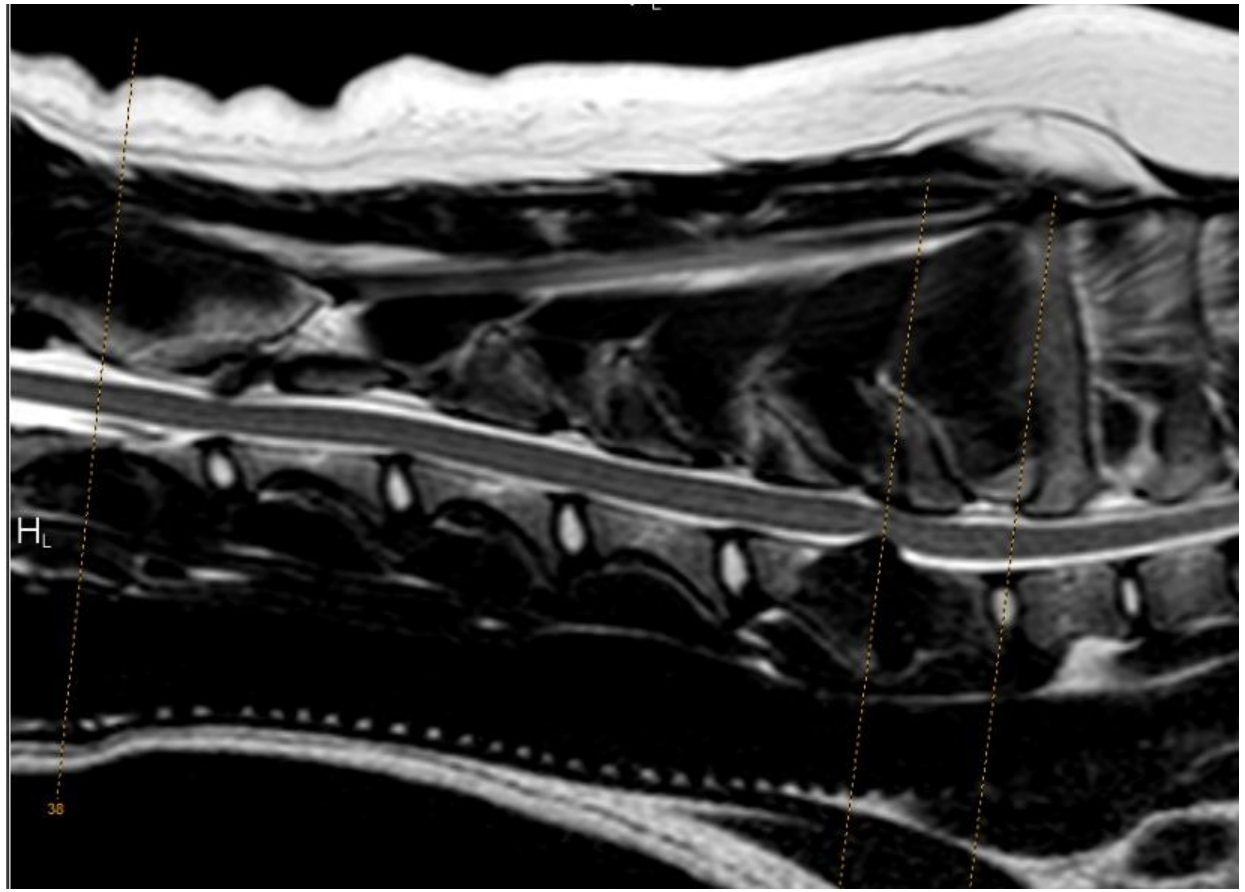
Measure Q 18-24 months

IMPACT

of Patient Safety Events

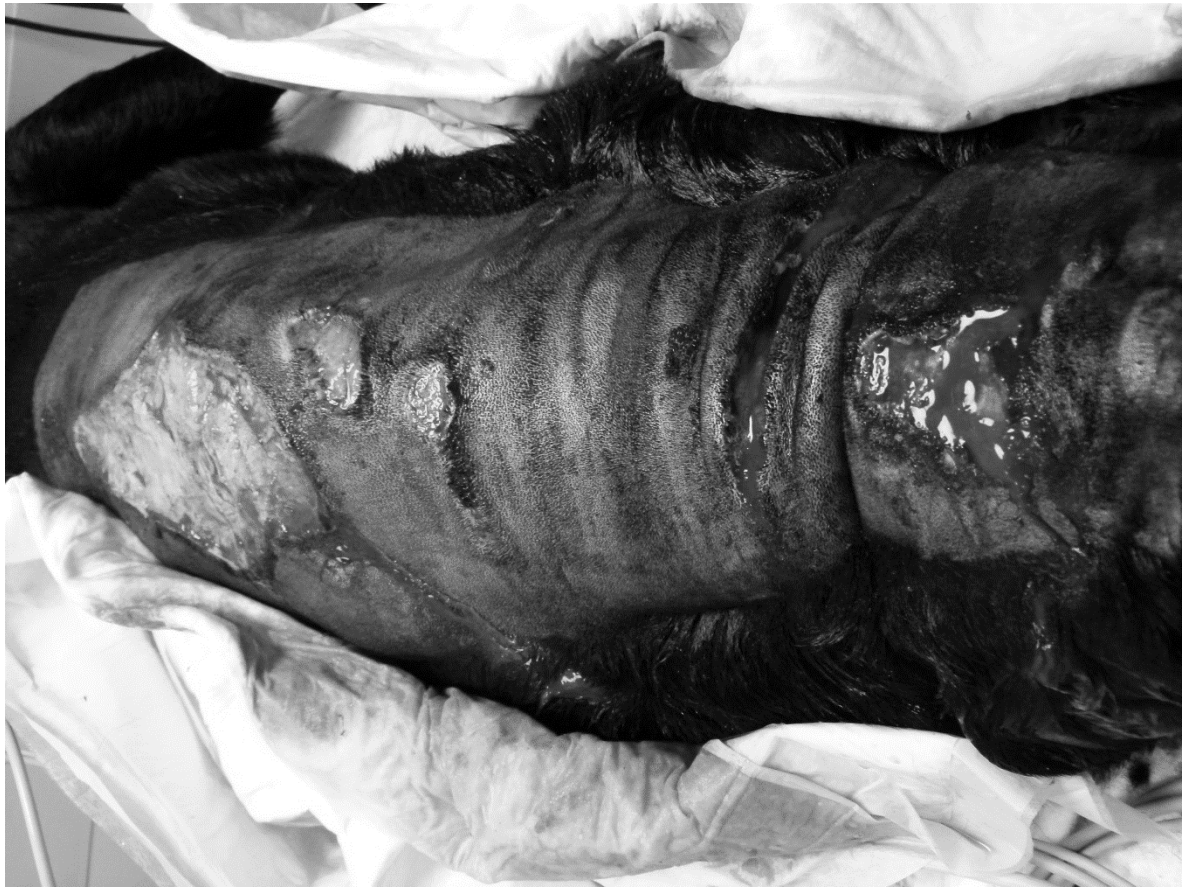
Bosley

8-year-old male Labrador retriever

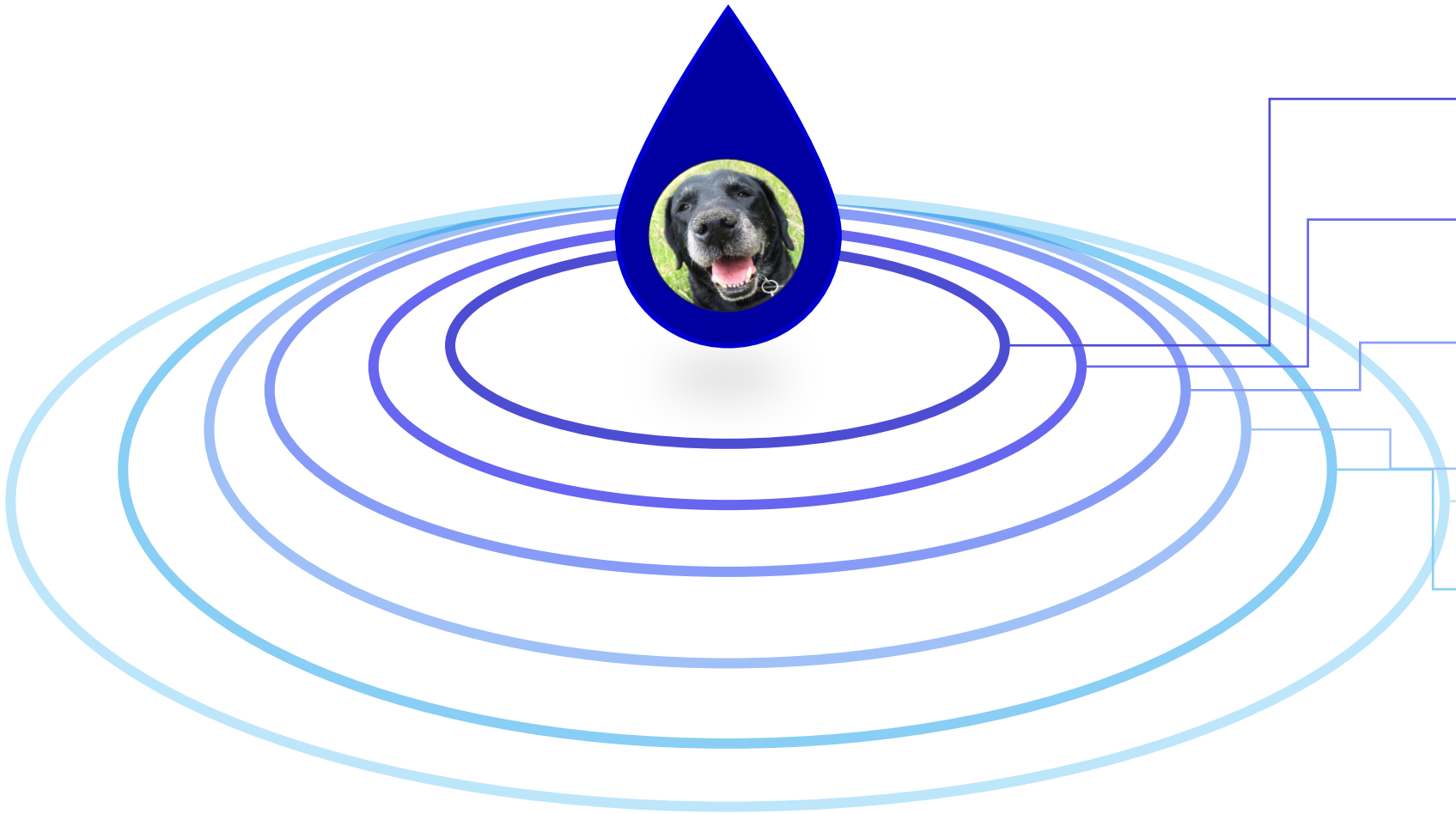


Burn injury from warming device

- Initially discharged but then represented
- Hospitalized 12 days
- 6 general anesthetics
- 2 sedations
- Daily wet-dry bandage wound care



Patient Safety Event Impact – beyond the patient



Emotional impact

Lost time for Associates & leaders

Workflow disruptions & inefficiencies

Increased Associate stress

Resolution & settlements

Potential lost revenue

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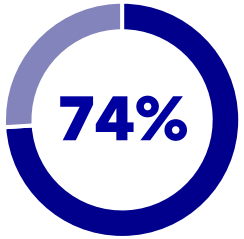
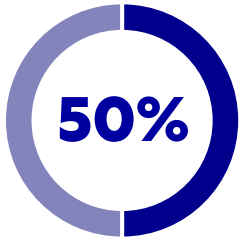
Impact on Veterinarians 2019



of veterinarians had experienced **1 or more adverse events in the last 12 months**



reported that adverse events **affected both professional and personal lives**

Special Report

Veterinarians' experiences with near misses and adverse events

Lori R. Kogan PhD
Mark Rishniw DVM, PhD
Peter W. Hellyer DVM
Regina M. Schoenfeld-Tacher PhD

From the Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO 80523 (Kogan, Hellyer); Veterinary Information Network, 777 W Covell Blvd, Davis, CA 95616 (Rishniw); and the Department of Molecular Biomedical Sciences, College of Veterinary Medicine, North Carolina State University, Raleigh, NC 27607 (Schoenfeld-Tacher).

Address correspondence to Dr. Schoenfeld-Tacher (regina_schoenfeld@ncsu.edu).

OBJECTIVE
To assess the prevalence of medical errors (specifically, near misses [NMs] and adverse events [AEs]) and their personal and professional impact on veterinarians.

DESIGN
Cross-sectional study.

SAMPLE
Members of the Veterinary Information Network (n = 46,481).

PROCEDURES
An electronic survey regarding veterinarians' experiences with NMs and AEs was distributed via email to an online veterinary community between September 24 and October 21, 2015. Responses were summarized and compared between genders by means of the χ^2 test.

RESULTS
606 veterinarians completed the survey (1.3% response rate). Overall, 447 (73.8%) respondents reported involvement in ≥ 1 NM (n = 389 [64.2%]) or AE (179 [29.5%]). The NMs had a short-term (≤ 1 week) adverse impact on professional life for 68.0% (261/384) of respondents and longer-term negative impact for 36.4% (140/385). The impact on respondents' personal lives was similar (63.6% [245/385] and 33.5% [129/385], respectively). For AEs, these numbers were 84.1% (148/176), 56.2% (99/177), 77.8% (137/176), and 50.6% (89/175), respectively. Both NMs and AEs were more likely to negatively impact female veterinarians than male veterinarians.

CONCLUSIONS AND CLINICAL RELEVANCE
These findings suggested that many veterinarians experience emotional distress after a medical error. Support should be provided to mitigate this adverse impact on the wellbeing of veterinarians and, potentially, their future patients. (*J Am Vet Med Assoc* 2018;252:586–595)

Adverse events and medical errors in veterinary and human medicine are inevitable, and research has only just begun to shed light on the prevalence of these incidents.[1] Medical errors can include those involving medications (eg, wrong medication, wrong dose, or failure to recognize an allergy), misidentification of patients, and errors or delays in diagnosis. Surgical errors (eg, wrong surgical site or procedure) are also possible, as are judgment errors that lead to an unnecessary surgery or delay of a necessary operation.[2]

A medical error can be defined as "a commission or omission with potentially negative consequences for the patient that would have been judged wrong by skilled and knowledgeable peers at the time it occurred, independent of whether there were any negative consequences."[3] Such errors can therefore be distinguished from complications or unpreventable AEs, which are an acknowledged risk of medical care and surgical procedures.[4,5] This definition of medical error also includes actions that do not actually result in direct harm to patients, referred to as NMs.[5,6] An NM can be defined as an incident that could have had adverse consequences but did not, and is indistinguishable from a full-fledged AE in all but outcome. Examples of NMs include incorrect selection of a potentially harmful drug that was never administered, prescription of the wrong drug that resulted in no harm to the patient, or scheduling of surgery for the wrong body part but catching this error before surgery begins.

The effect of these errors on patient outcomes is staggering. Findings in a 2016 study[1] suggest that 251,454 patient deaths/y in US hospitals are attributable to medical error. Although much research has been conducted to explore the impact of medical errors on patient outcome, the impact of these errors on physicians has received much less attention in the literature.[3,7-9] However, data are emerging regarding the impact of these errors on the health-care providers and on patients treated by providers involved in an error.[10]

ABBREVIATIONS

AE	Adverse event
NM	Near miss
VIN	Veterinary Information Network

JAVMA, 2019 Kogan et al. Veterinarians Experience with Near Miss and Adverse Events

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Impact on Veterinary Team Members 2024

The effects of patient safety events and the potential mitigating roles of personal resilience, good leadership, and a psychologically safe culture

L Kogan et al.

Psychological Impact:

- **50%** feel embarrassed from these events
- **48%** feel fearful of future occurrences
- **42%** feel deep remorse for these events

Self Efficacy:

- **45%** feel inadequacy regarding patient care abilities
- **38%** wondered if they weren't good health providers
- **36%** became afraid to perform difficult or high-risk procedures

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Second Victim Syndrome

"Health care providers who are involved with a patient-related adverse event or medical error, and as a result, experience emotional and sometimes physical distress."

Feel responsible for the outcome

Feel they failed the patient

Question their own competence

?

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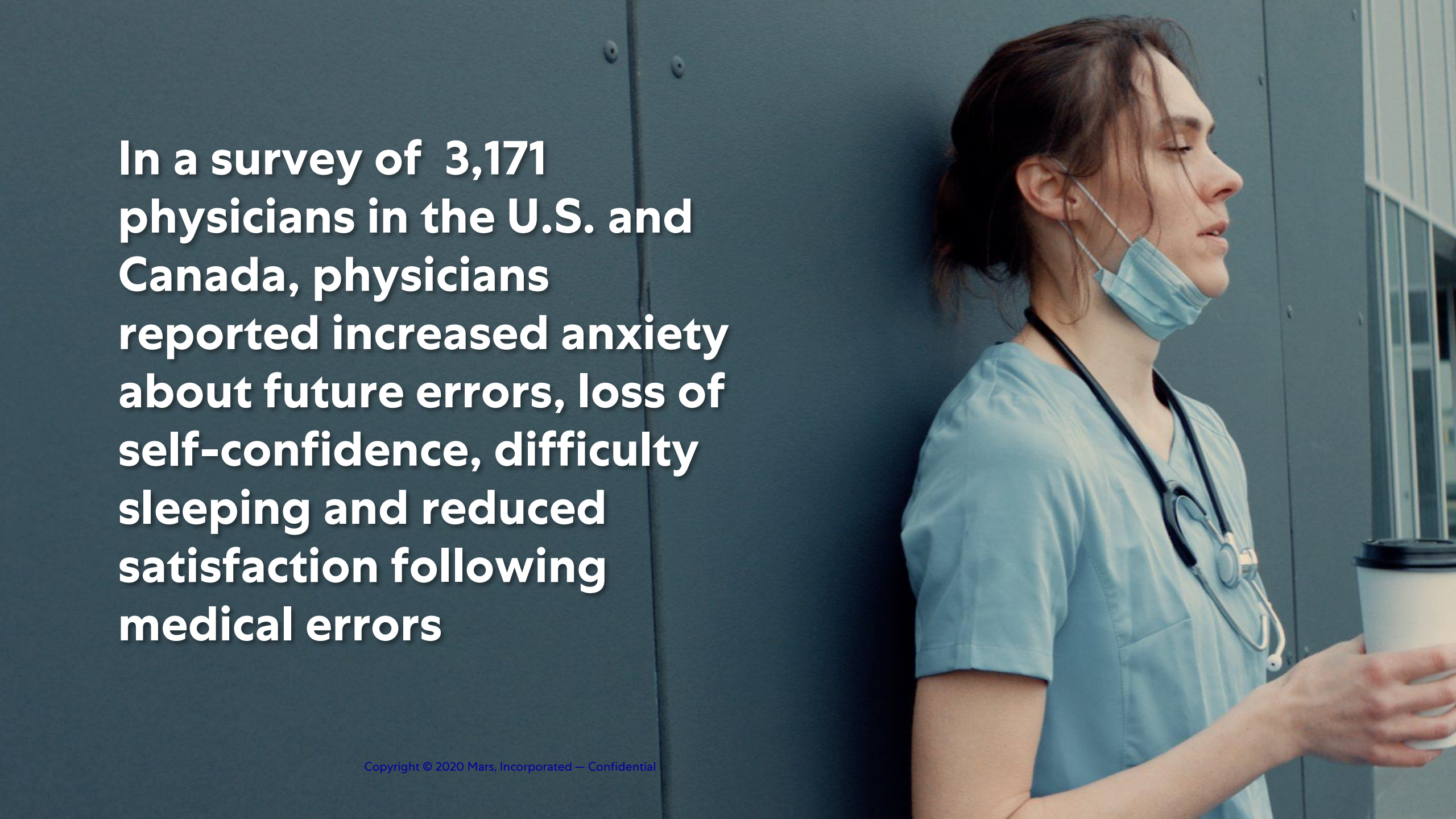

Medical error: the second victim

The doctor who makes the mistake needs help too

When I was a house officer another resident failed to identify the electrocardiographic signs of the pericardial tamponade that would rush the patient to the operating room late that night. The news spread rapidly, the case tried repeatedly before an incredulous jury of peers, who returned a summary judgment of incompetence. I was dismayed by the lack of sympathy and wondered secretly if I could have made the same mistake—and, like the hapless resident, become the second victim of the error.

improvements that could decrease errors. Many errors are built into existing routines and devices, setting up the unwitting physician and patient for disaster. And, although patients are the first and obvious victims of medical mistakes, doctors are wounded by the same errors: they are the second victims.

Virtually every practitioner knows the sickening realisation of making a bad mistake. You feel singled out and exposed—seized by the instinct to see if anyone has noticed. You agonise about what to do, whether to

Canadian Medical Education Journal

Review Papers and Meta-Analyses

Peer support programs in the fields of medicine and nursing: a systematic search and narrative review

Programmes de soutien par les pairs dans les domaines de la médecine et des sciences infirmières : recension systématique et revue narrative

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Peer Support Programs for Physicians

Mitigate the Effects of Emotional Stressors Through Peer Support

CME CREDITS: 0.5

Jo Shapiro, MD, FACS
Associate Professor of Otolaryngology–Head and Neck Surgery, Harvard Medical School; Founder, Center for Professionalism and Peer Support, Brigham and Women's Hospital; Senior Faculty, Center for Medical Simulation, Boston MA; Consultant, Massachusetts General Hospital

Open access Research

BMJ Open

Duration of second victim symptoms in the aftermath of a patient safety incident and association with the level of patient harm: a cross-sectional study in the Netherlands

Kris Vanhaecht,[1,2] Deborah Seys,[1] Loes Schouten,[3] Luk Bruyneel,[1,4] Ellen Coeckelberghs,[1] Massimiliano Panella,[5] Gerda Zeeman,[6] for the Dutch Peer Support Collaborative Research Group

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BMJ 2000

PEER SUPPORT

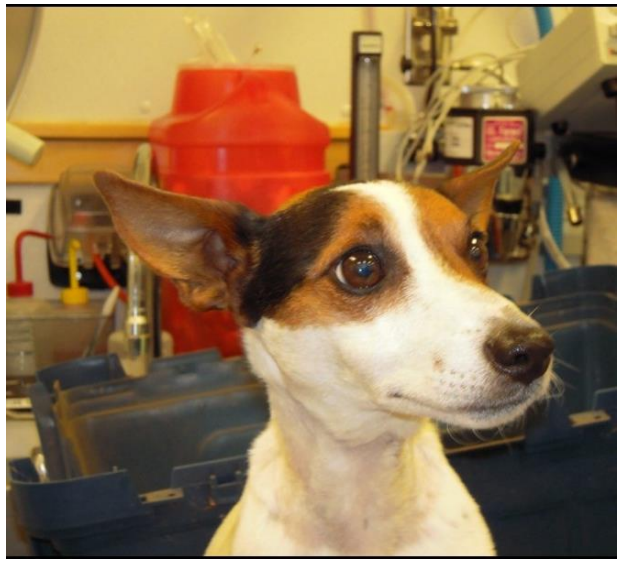
‘RISE’ network

‘Resilience in Stressful Events’

Johns Hopkins

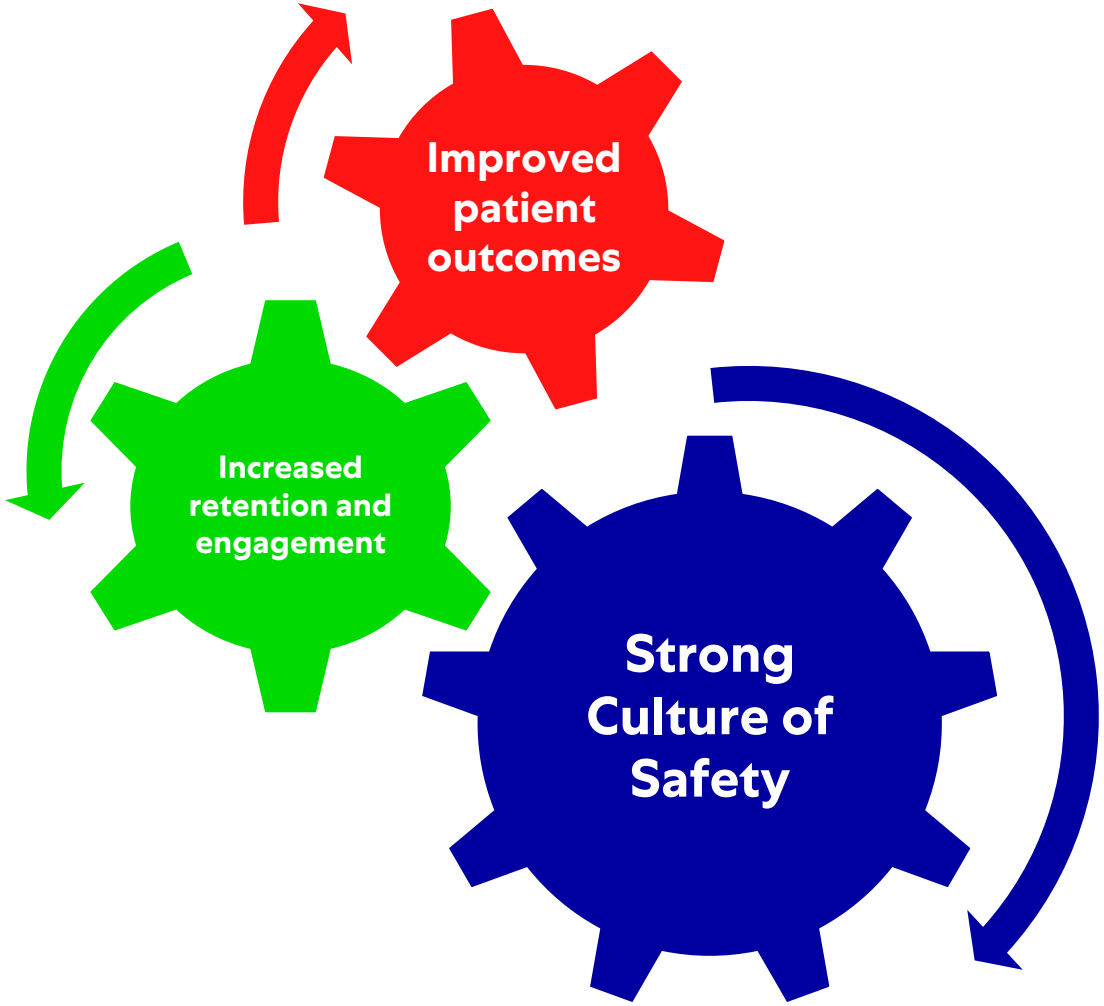
Source: SAMHSA

Patient Safety's Critical Impact



Medical error is a top leading cause of death in humans in the US
(Est. only 40% of errors reported)

The same errors that harm patients **also** traumatize healthcare workers



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