Preventing Clinical Errors in Practice

Scott Munsterman, DC, FICC, CPCO

Scott Munsterman, DC, FICC, CPCO
Brief Bio

Dr. Scott Munsterman is an acknowledged expert on the transforming model of health care delivery and compliance with a commitment to the promotion and advancement of the chiropractic profession. Dr. Munsterman is founder and CEO of Best Practices Academy, a clinical improvement organization providing focused leadership to bring practices into compliance with regulatory standards, equip them to improve clinical outcomes, and integrate into the transformed care delivery system. Dr. Scott works with ChiroArmor and eChiroEHR.

Dr. Munsterman is a graduate of Northwestern Health Sciences University, where he has served as Vice-Chair of the Board of Trustees and on the President's Cabinet as Chief of Care Delivery. He was awarded Chiropractor of the Year in South Dakota and the Fellow of the International College of Chiropractors (FICC). He is a professional compliance officer. Dr. Munsterman served two terms as Mayor of the City of Brookings and three consecutive terms in the South Dakota House of Representatives, where he chaired the House Health and Human Services Committee and also chaired the Legislative Planning Committee. He is author of the books "A Vision for South Dakota", "Care Delivery and Chiropractic: An Opportunity Waiting", and "Unfinished Business".

However, he states his greatest accomplishment has been his five daughters and six grandchildren - with more success to come.

Disclaimer

The topics taught here are for the sole purpose of the chiropractic profession, any transference to other healthcare disciplines are at the risk of the individual's discretion. The presenter is an investor in the Best Practices Academy and ChiroArmor/ClinicArmor. The Best Practices Academy and ChiroArmor/ClinicArmor denies responsibility or liability for any erroneous opinions, analysis, and coding misunderstandings on behalf of individuals undergoing this course.

This presentation was current at the time it was published or uploaded onto the web. Medicare policy changes frequently so links to the source documents have been provided within the document for your reference. We have based the majority of this program on the guidelines set forth by the OSHA, OCR, HHS, CMS, NCQA, URAC, AAAHC, AHRQ, and other agencies involved in health care standards and research dissemination, as it relates to the chiropractic profession. We encourage readers to review the specific statutes, regulations, and other interpretive materials for a full and accurate statement of their contents.

No legal advice is given in this program, and we encourage you to refer any such questions to your healthcare attorney.

Patient Safety

The prevention of errors and adverse effects to patients associated with health care.
World Health Organization (WHO)

First do no harm.

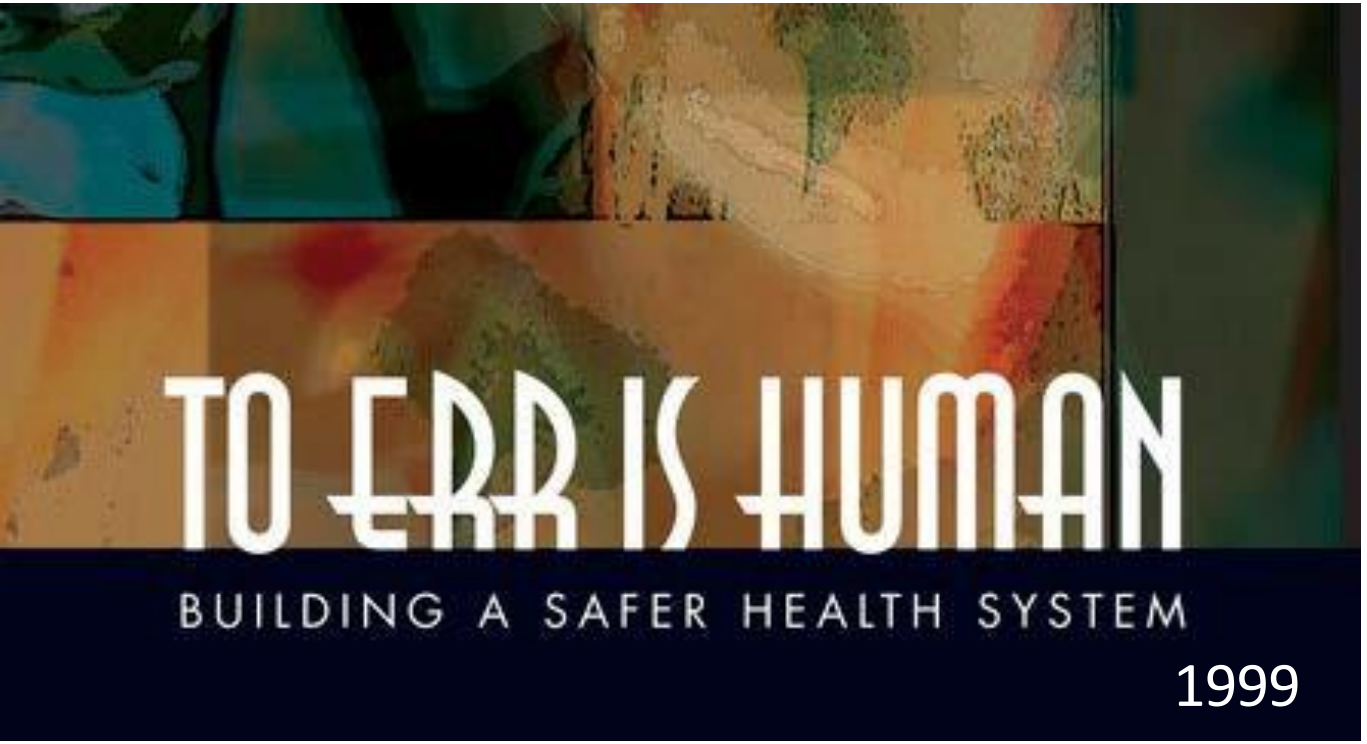
Clinical Errors

A Clinical Error is an **act of omission or commission in planning or execution** that contributes or could contribute to an unintended result.

Defining medical error. Ethan D. Grober, John M.A. Bohnen Can J Surg. 2005 Feb; 48(1): 39–44. PMCID: PMC3211566

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3211566/

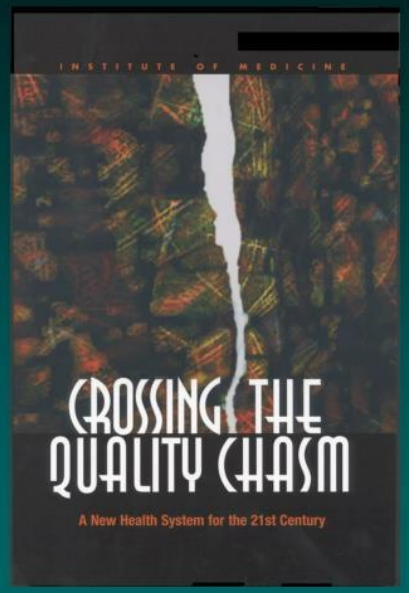
Landmark Report on Patient Safety



Reported that deaths associated with medical errors were higher than from car accidents, breast cancer and AIDS combined. *Institute of Medicine (IOM)*

Resulted in increased awareness of U.S. medical errors. Major trigger for designing safer health care systems. Highly influential.

CROSSING THE QUALITY CHASM



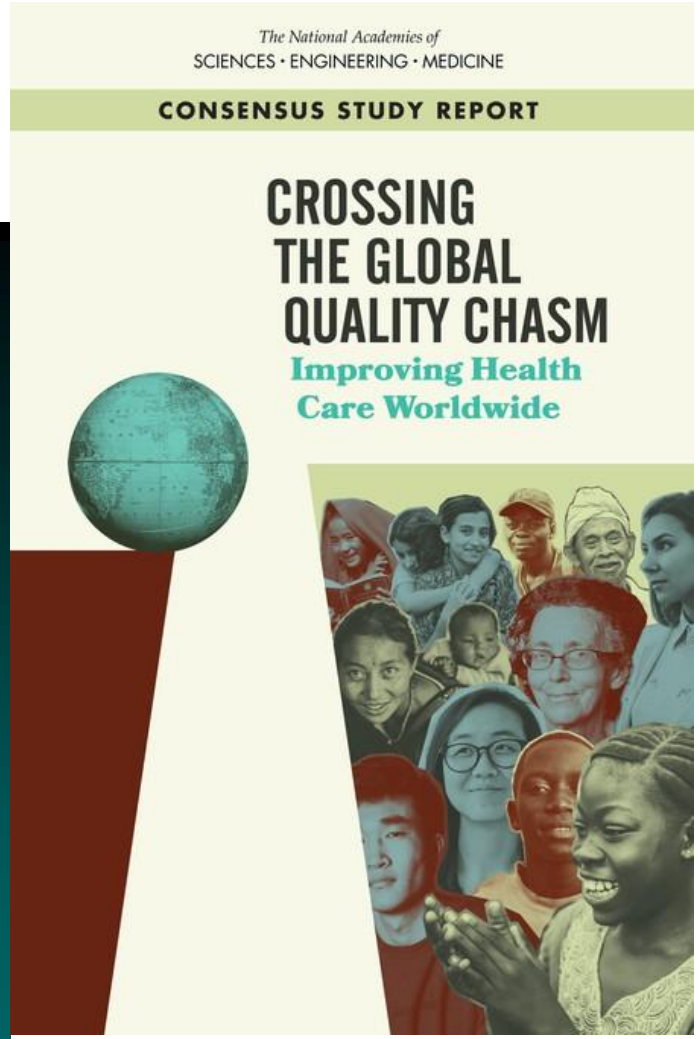
"Quality problems occur typically not because of failure of goodwill, knowledge, effort or resources devoted to health care, but because of fundamental shortcomings in the ways care is organized"

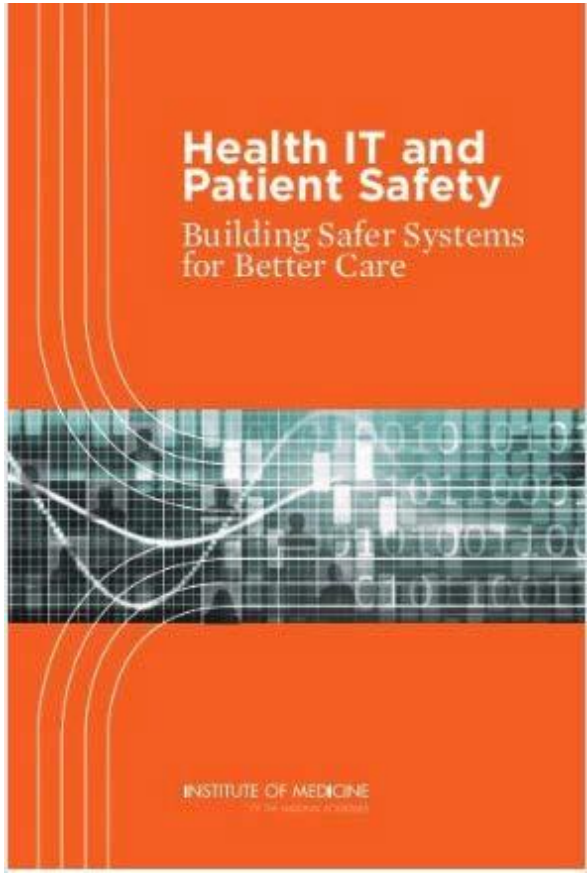
Trying harder will not work: changing systems of care will!

A NEW HEALTH SYSTEM FOR THE 21ST CENTURY (IOM, 2001)

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

INSTITUTE OF MEDICINE

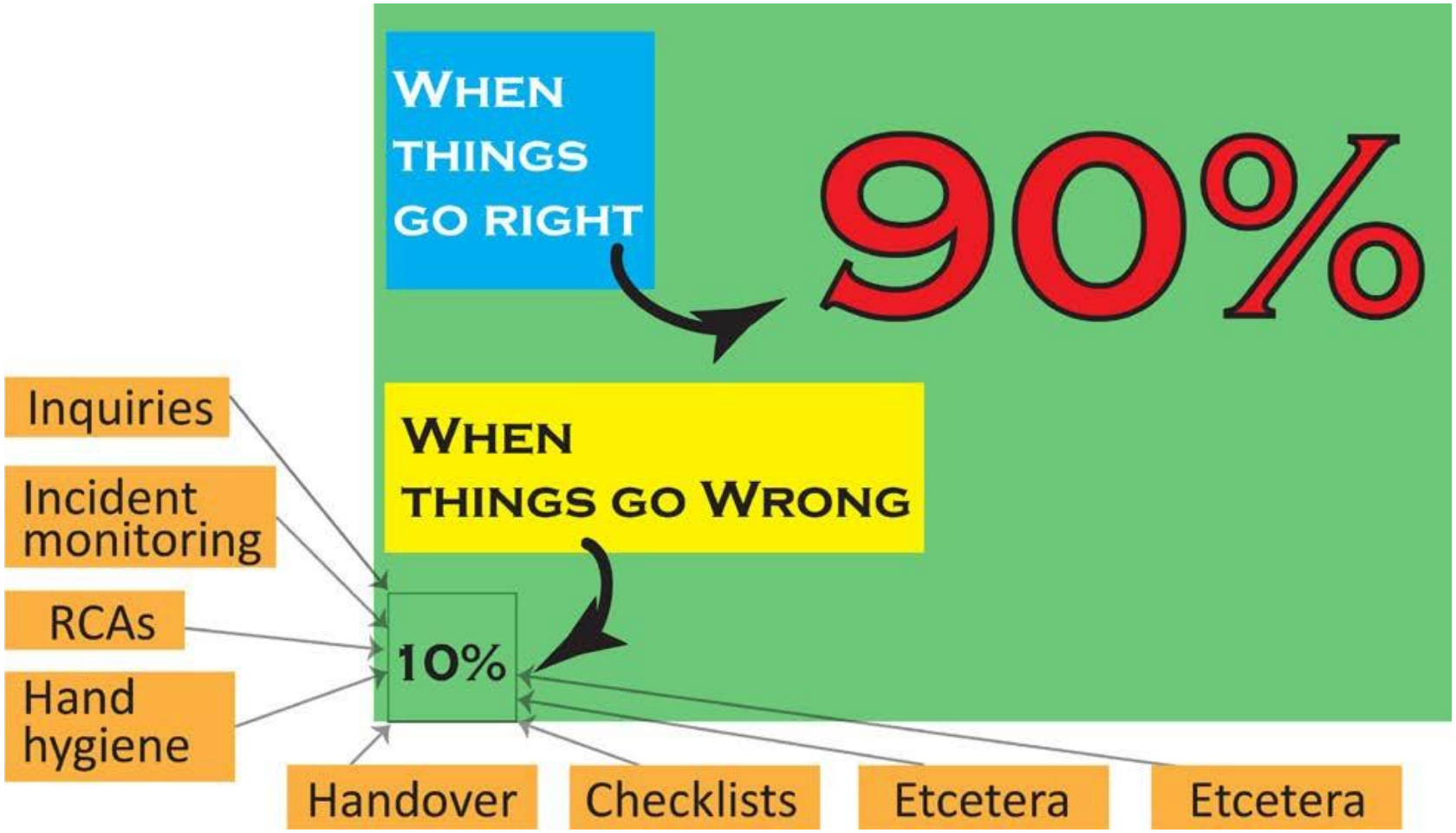




Series of important safety reports

Typical Goal:
Keep the number of adverse outcomes as low as possible

Trying to make sure things don’t go wrong



The amazing thing about health care isn't that it produces adverse events in 10% of all cases, but that it produces safe care in 90% of cases.

Restated Goal:
Keep the number of acceptable outcomes as high as possible

Trying to make sure things go right

17 studies in 10 years

25% of Medicare patients experience harm.

Physician-reviewers determined that 43 percent of the harm events could have been prevented if patients had been provided better care.

56% of harm events were not preventable and occurred even though providers followed proper procedures…

Inpatient Care Errors

Immediate and Catastrophic

Outpatient Errors

Eventual and Significant to Catastrophic

Although errors in ambulatory settings are **less likely to lead to immediate harm** than errors in acute/inpatient care, their **health consequences may be significant** nonetheless (e.g., from missed cancer diagnosis).

Singh H, Carayon P. A Roadmap to Advance Patient Safety in Ambulatory Care. JAMA. 2020 Dec 22;324(24):2481-2482. doi: 10.1001/jama.2020.18551. PMID: 33351052; PMCID: PMC8016440.

U.S. Department of Health and Human Services
Office of Inspector General
Report in Brief
May 2022, OEI-06-18-00400

57% of all diagnostic failures occur in ambulatory care settings.

Evidence suggests that **medication errors**, **diagnostic errors**, and **communication and coordination breakdowns** are the most common causes of preventable harm among outpatients.

The scope and consequences of harm include physical, psychological, and/or financial harms to patients, caregivers, health care workers, and society.

Singh H, Carayon P. A Roadmap to Advance Patient Safety in Ambulatory Care. JAMA. 2020 Dec 22;324(24):2481-2482. doi: 10.1001/jama.2020.18551. PMID: 33351052; PMCID: PMC8016440.

Unique challenges in the outpatient care setting…

Volume of patients, scheduled time is limited to “averages”, staffing and competencies available, etc.

Outpatient care must be **adaptive** to these challenges and use **technology**, **systems**, **space**, **management** and timely **interaction** to be successful.

How does safety relate to the patient experience?

It **significantly impacts** the Likelihood to Refer (LTR)

Based on Likert-type scale of 5 responses: very poor, poor, fair, good, and very good.

The percentage of responses answered “very good” is called the Top Box score.

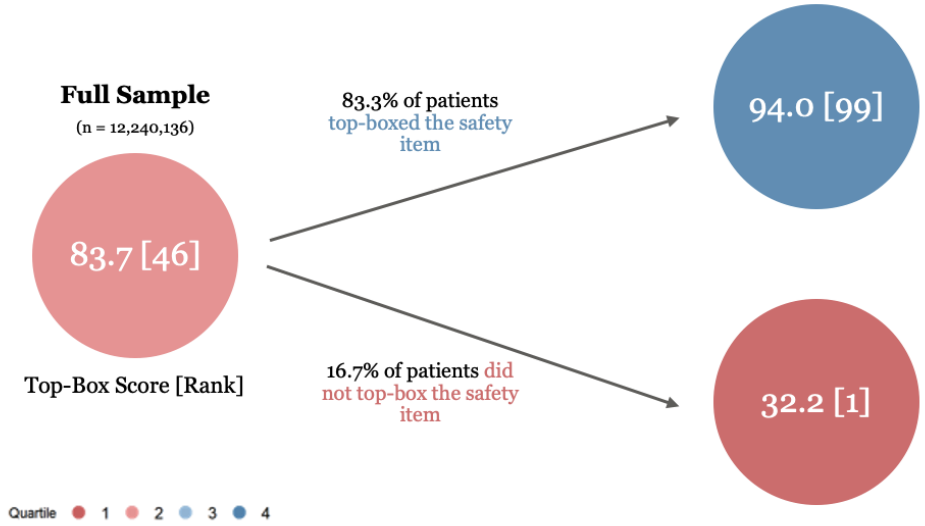
"How well the staff protected your safety (by washing hands, wearing ID, etc.).”

12 million surveys from 2021 to understand the **relationship between patients' experiences of safety and their overall "Likelihood to Recommend"** (LTR) the practice.

Study found that patients’ perceptions of safety are strongly correlated with LTR. If a patient had a **top box response to the safety question, their LTR was in the 99th percentile rank**, whereas if they **did not have a top box to safety, the LTR fell to the 1st percentile rank**.

Safety and patient experience in the ambulatory setting: You can't have one without the other

PATIENT PERCEPTION OF SAFETY DIRECTLY RELATES TO LTR

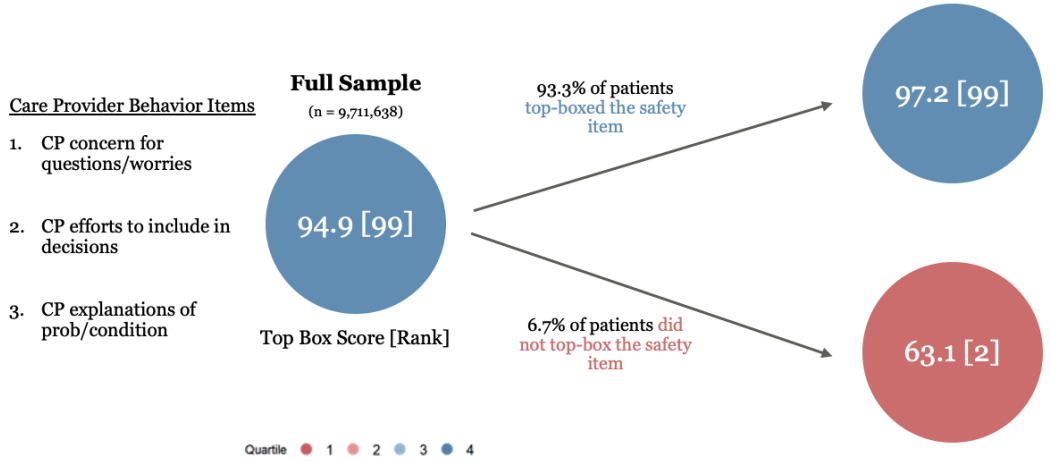


- Patients have an **83.7% likelihood** of top-boxing the LTR practice item
- When patients **feel well-protected by staff**, that **likelihood increases to 94%**

- Based on Press Ganey & CAHPS Medical Practice surveys received in 2021
- Respondents must have answered both safety and LTR items
- Scores are phone and internet mode-adjusted, and benchmarked to the "National Facilities" peer group as of Jan 1, 2022

https://info.pressganey.com/press-ganey-blog-healthcare-experience-insights/safety-and-patient-experience-in-the-ambulatory-setting

LOYALTY BUILT BY CARE PROVIDERS CAN BE ERODED BY NEGATIVE PERCEPTIONS OF SAFETY



- Patients of **providers with good care behaviors** have a **94.9% likelihood** of top-boxing the LTR practice item
- However, when these patients **do not feel well-protected by staff**, that **likelihood decreases to 63.1%**

- Based on Press Ganey & CAHPS Medical Practice surveys received in 2021
- Respondents must have answered both safety and LTR items, as well as top-boxed all three care provider behavior items
- Scores are phone and internet mode-adjusted, and benchmarked to the "National Facilities" peer group as of Jan 1, 2022

If patients experienced top box for questions related to caring behaviors, they were in the 99th percentile for LTR. However, if patients experienced top box for caring behaviors but didn't experience top box for safety, they fell to the 2nd percentile.

Therefore, any loyalty built by caring providers can be eroded by negative perceptions of safety.

What are the potential factors that patients perceive “safe”?

1. **Competence and Communication of Healthcare Providers**
   - **Clear communication**: Patients feel safer when clinicians explain diagnoses, procedures, and medications clearly.
   - **Listening and empathy**: Feeling heard and respected fosters trust and a sense of safety.
   - **Visible hygiene practices**: Seeing staff wash hands or sanitize equipment reassures patients.
   - **Professionalism**: Competent, calm, and organized behavior from staff signals safety.
2. **Information and Involvement in Care**
   - **Informed decision-making**: Patients feel safe when they’re involved in decisions and understand their options.
   - **Written instructions**: Clear after-visit summaries or instructions help prevent medication errors or misunderstandings.
   - **Continuity of care**: Familiarity with staff or clinicians over time builds trust and reduces anxiety.
3. **Clinic Environment**
   - **Cleanliness and organization**: A clean, well-maintained clinic gives patients confidence in infection control.
   - **Privacy**: Feeling that personal information and physical privacy are respected enhances psychological safety.
   - **Signage and wayfinding**: Easy-to-navigate spaces reduce confusion and stress.
4. **Efficient Systems and Processes**
   - **Timely appointments**: Reasonable wait times and smooth scheduling processes reduce frustration and risk of health deterioration.
   - **Follow-up systems**: Knowing the clinic will follow up on test results or referrals increases confidence in care continuity.
   - **Error prevention**: Use of checklists, patient identification verification, and medication reconciliation are perceived as safety nets.
5. **Technology and Access to Records**
   - **Electronic health records**: Patients often feel reassured when providers refer to accurate, up-to-date and HIPAA secure medical records.
   - **Patient portals**: Access to test results, appointment scheduling, and messaging systems increases transparency and control.
6. **Emotional and Psychological Safety**
   - **Non-judgmental care**: Feeling accepted regardless of condition, background, or behavior increases trust and willingness to seek care.
   - **Cultural sensitivity**: Language access, culturally appropriate care, and understanding of diverse needs promote feelings of safety.

Patient Safety Perception Checklist

1. Healthcare Provider Competence & Communication

- Do we explain things in a way a patient could understand?
- Did a patient feel we listened carefully to a them?
- Did a patient feel we were knowledgeable and competent?
- Did staff follow visible hygiene practices (e.g., handwashing, gloves)?
- Open-ended: “What made a patient feel confident or concerned about us?”

2. Patient Involvement & Information

- Was the patient involved in decisions about their care?
- Were the patient’s questions and concerns taken seriously?
- Was the patient given clear written instructions or a summary after their visit?
- Do you know that the patient understands their treatment plan?

3. Physical Environment & Accessibility

- Is the clinic clean and well-maintained?
- Is the waiting area comfortable and private?
- Do patients feel physically safe in the clinic environment?
- Is it easy for patients to find their way around the clinic?

Observation Checklist:

- Hand sanitizers available?
- Adequate lighting and signage?
- Cleanliness of exam rooms and waiting areas?

4. Systems & Process Reliability

- Are patients seen at or near their scheduled appointment time?
- Are follow-up steps (e.g., test results, referrals) clearly explained?
- Are a patient asked to verify their name, date of birth, or medications?
- Were there clear procedures for emergencies or unexpected concerns?
- “Describe a time the clinic followed up—or failed to follow up—on something important.”

5. Use of Technology

- Do we use your health records accurately and effectively?
- Do patients have access to a patient portal or online records?
- Are test results shared in a timely and understandable way?
- “How does a patient feel about how your health information (HIPAA compliance) is handled here?”

6. Emotional, Cultural, and Psychological Safety

- Do patients feel respected and not judged?
- Are their cultural or language needs met?
- Do patients feel comfortable asking questions or expressing concerns?

Open-Ended Questions:

- “Is there anything we could do to make a patient feel more respected or understood?”
- “Has a patient ever avoided care here due to feeling unsafe or uncomfortable?”

What's the difference between…

Adverse Events vs Near Misses

System vs Human

What is an Adverse Outcome or Event?

An **unexpected and undesired incident** directly associated with the care or services provided to the patient; an incident that occurs during the process of providing health care and **results in patient injury or death; or an adverse outcome for a patient, including an injury or complication**.

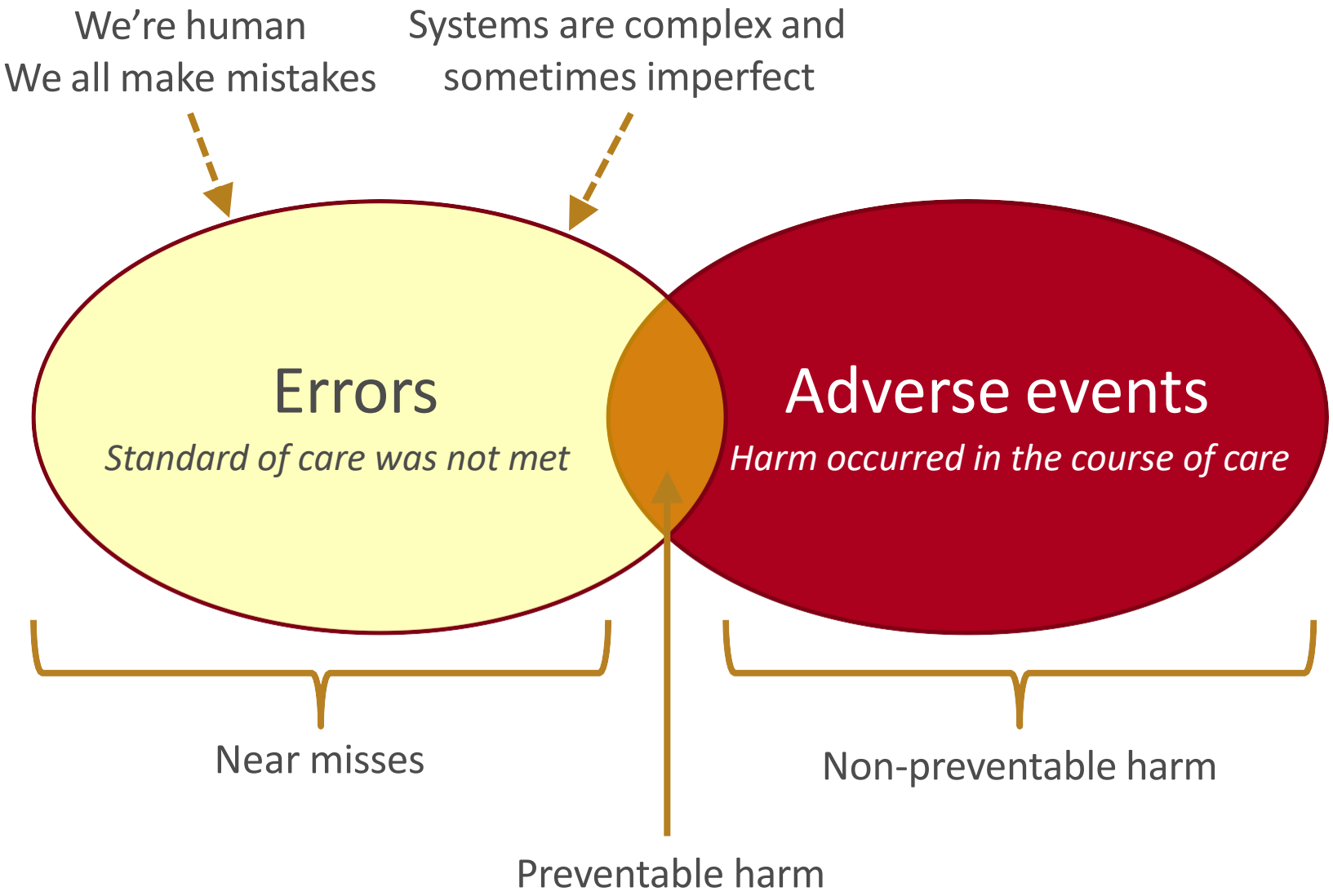
Preventable Harm

“unintended physical injury resulting from or contributed to by medical care (including the absence of indicated medical treatment)”

Institute for Healthcare Improvement

Recent studies (as of 2017) of medical errors have estimated errors may account for as many as **251,000 deaths annually** in the United States (U.S)., making medical errors the **third leading cause of death**

Anderson JG, Abrahamson K. Your Health Care May Kill You: Medical Errors. Stud Health Technol Inform. 2017;234:13-17. PMID: 28186008.



Causes of Errors

Adverse Events vs Near Misses
Human vs System
Commission vs Omission

System vs Human

Broad versus Focused: Sharp End to Blunt End

Organizational

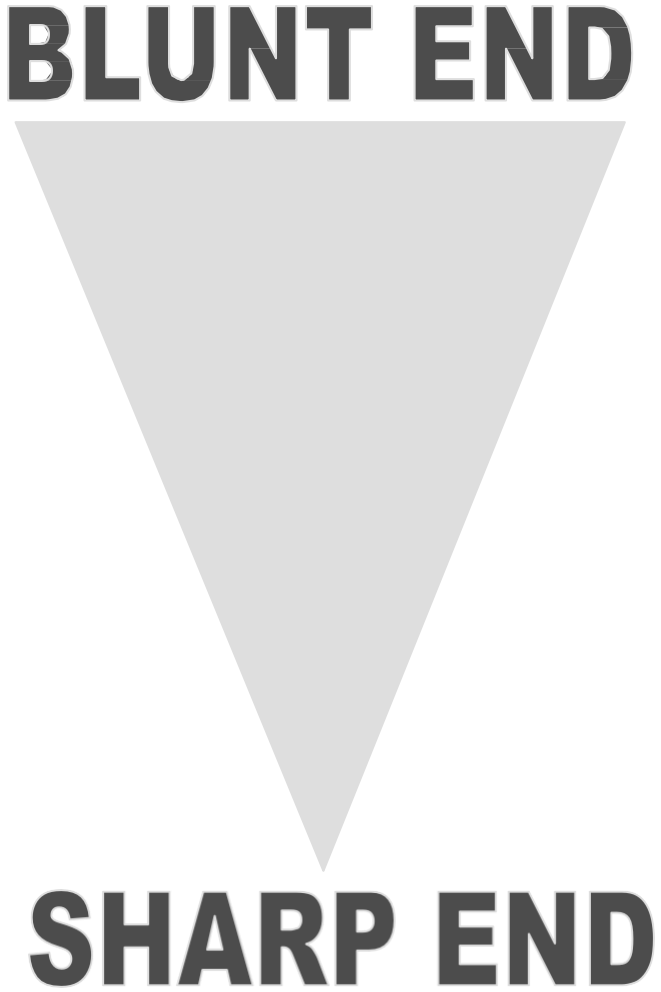
- Culture & Leadership
- Management Priorities
- Policies & Procedures
- Training
- Communication & Coordination

Environment & Equipment

- Design
- Construction
- Materials

Human Factors

- Knowledge
- Rules
- Skills



Common Human Errors

Skill Based (slips and lapses)

- Usually happens when a familiar, automatic procedure/task is being performed. Not much conscious action. May happen when the situation falls out of routine (driving a car)

Rule Based

- When a familiar pattern is not being recognized, a shortcut, not recalling the rule appropriately

Knowledge Based

- When a situation is unique or unknown, for which no rules exist and intelligent problem solving is required

Helmreich's observations:
Similarity between medicine and aviation

"…[both stress] the need for perfection and a deep perception of personal invulnerability…"

Helmreich, Davies.
Culture, Threat and Error: Lessons From Aviation.
Can J Anesth 2004; 51:6

The 2nd Victim

We know who the first victim of a medical error is – who is the second?

Can’t expect affected clinicians to do this well without support

Potential long-term consequences…

Burnout and Depression

TABLE 5. Factors Independently Associated With Perceived Medical Errors on Multivariate Analysis

Characteristic and Associated Factors	Odds Ratio*	*P*
Positive depression screen	2.217	<0.0001
Burnout	2.016	<0.0001

Burnout and depression = independent predictors of reporting a recent major medical error

Shanafelt TD, Balch CM, et al. Ann Surg 2010; 251(6)

Suicidal ideation in MD's correlates with recent errors

12.7% **Of MDs reporting recent errors had SI (n=691)**

VS.

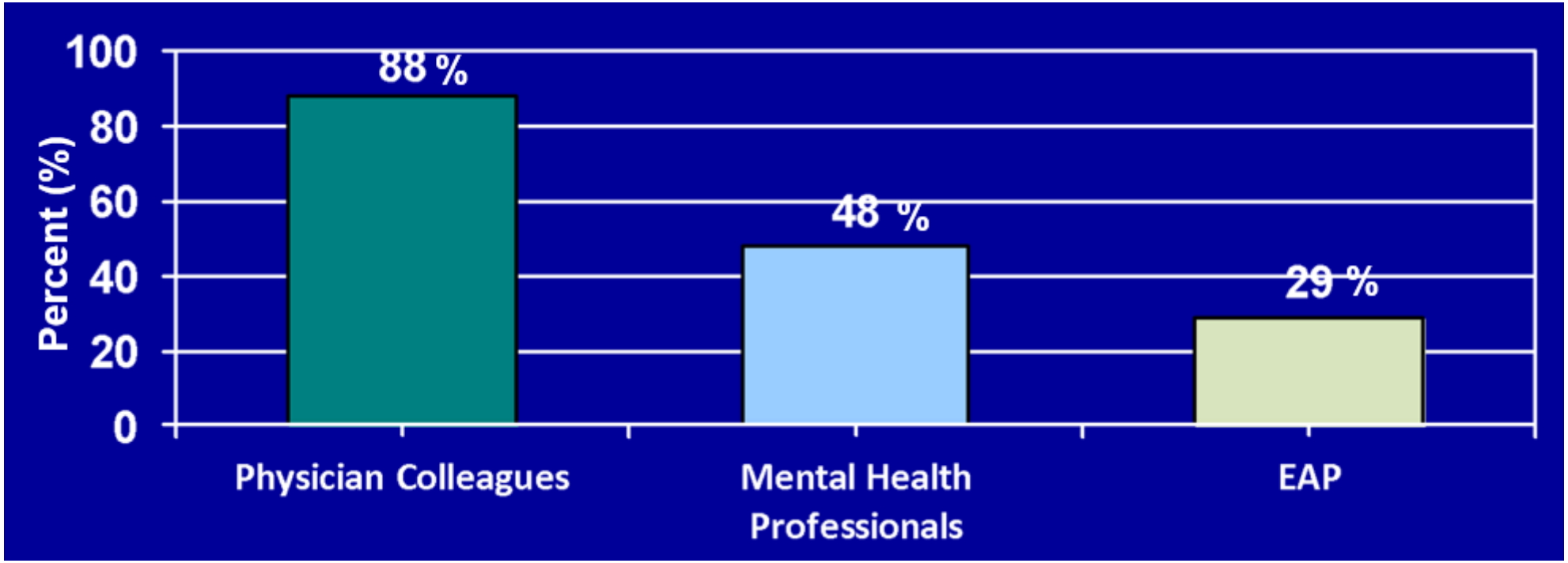
5.8% **Of MDs who did not report recent errors had SI (n=5895)**

Tawfik DS, Profit J, Morgenthaler TI, et al. Mayo Clin Proc. 2018 Jul 9.

How do we facilitate coping and resilience?

Hu J, Fix M, Hevelone N, Lipsitz S, Greenberg C, Weissman J, Shapiro J.
Attitudes and needs of physicians for emotional support: The case for peer support. *JAMA Surg 2012*

Sources of Support



Hu J, et al. *JAMA Surg 2012*

Peer Support
(we need both)

- Group Peer Support
- 1:1 Peer Support

Foundations of Peer Support

Presence - Listening

Emotional intelligence

Non-judgmental curiosity

Problem solving guidance

How do errors occur?

Most errors are the result of various causes and predisposing conditions.

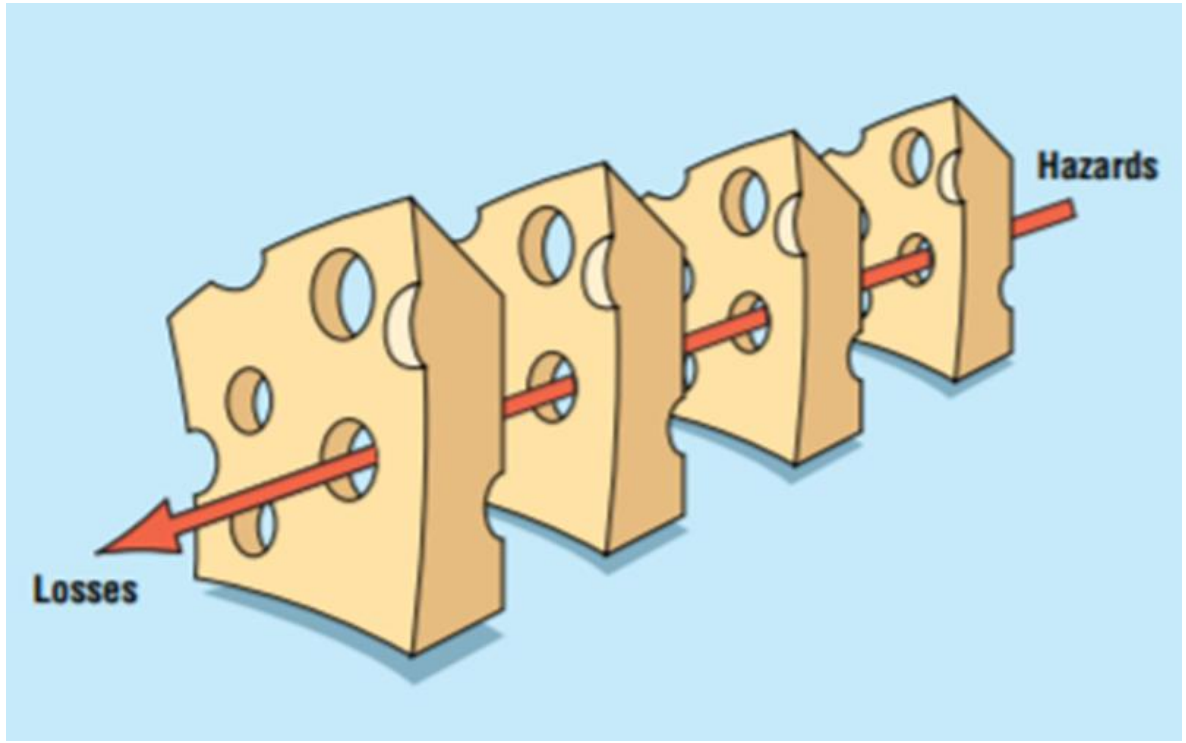
In other words, there are a variety of factors involved that can lead to or cause a clinical error or adverse event – or a near miss.

Swiss Cheese Model

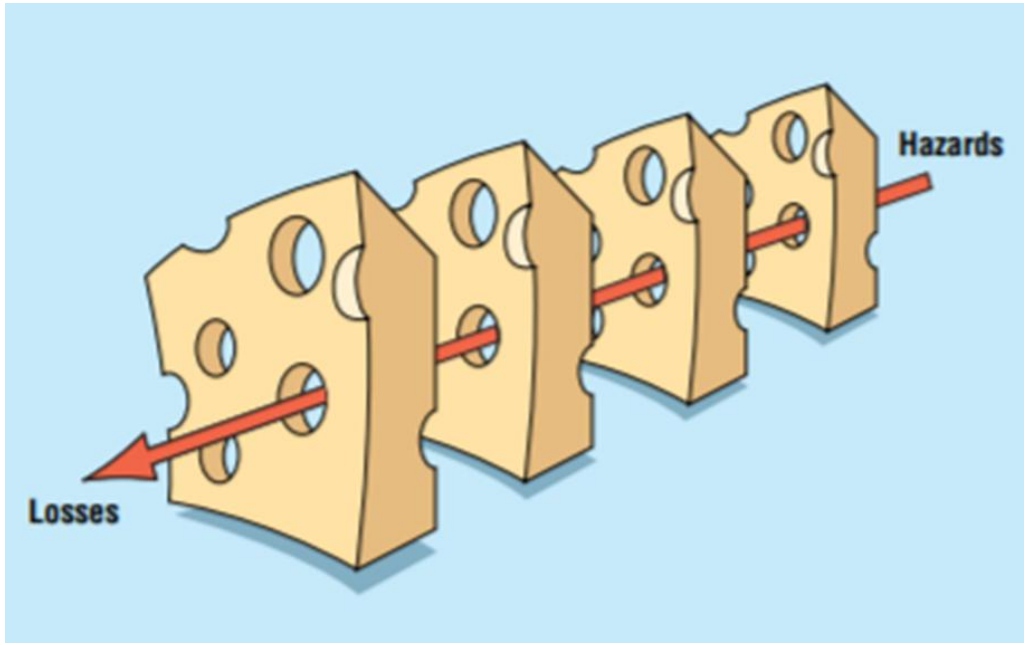
Reason J. Human error: Models and management. BMJ 2000; 320:768-70

Holes in the Defense Layers

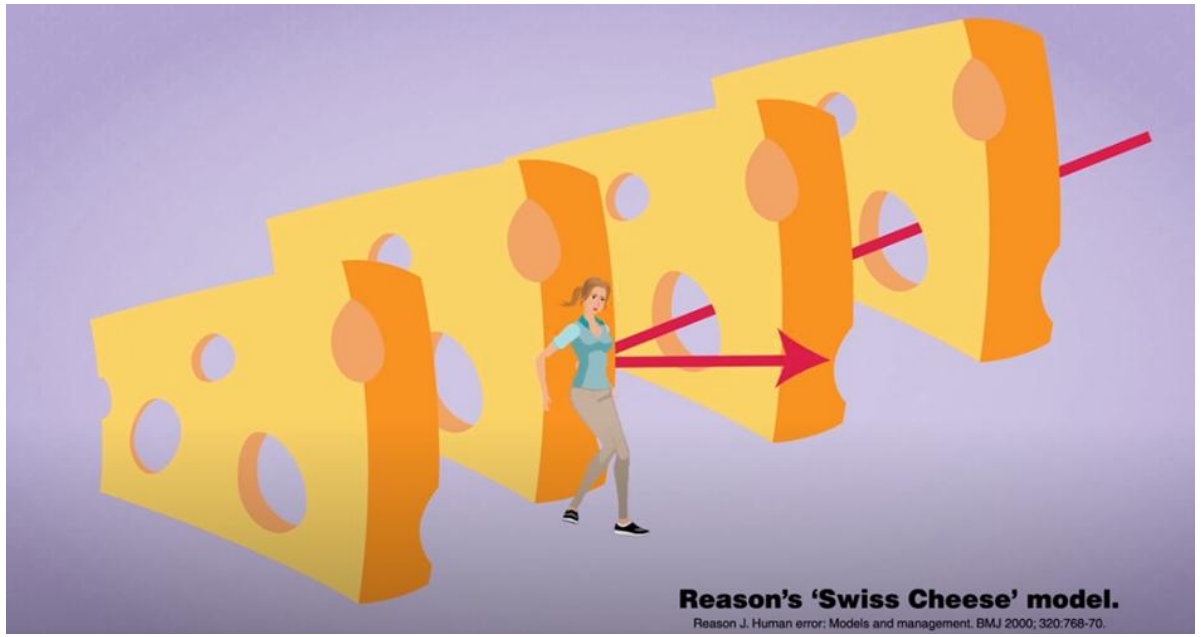
A bad outcome occurs only when the holes in many defense layers momentarily line up to permit a trajectory of an accident opportunity—bringing hazards into damaging contact with patients.



https://www.youtube.com/watch?v=7Y8HupZ2e0s&feature=youtu.be



It just takes one thing to block the incident…



Reasons for Holes in the Defense Layers

Active Failures are the unsafe acts committed by people who are in direct contact with the patient or system. They take a variety of forms: slips, lapses, fumbles, mistakes, and procedural violations.

Latent Conditions have two kinds of adverse effects:

- they can translate into error provoking conditions within the workplace (i.e. time pressure, understaffing, inadequate equipment, fatigue, inexperience) and
- they can create long-lasting holes or weaknesses in the defenses (i.e. lack of training for staff, improper therapeutic or billing practices, lack of compliance policy).

Most Common Patient Safety Issues

- Falls
- Equipment malfunction
- Infection prevention procedures
- Faulty patient perception of an incident occurring stemming from lack of communicating to the patient what to expect from treatment
- Underlying medical emergency/red flag (i.e., cardiovascular, cerebrovascular, fracture, infection, cancer)
- Lack of information from the patient (HPI)
- Gap in Care > 6 weeks

Other Common Patient Safety Issues

- Short-staffed
- Communication failure
- Failure in systems process, workflows, etc.
- Anything else you can think of that is unique to your practice environment, your technique or care programs, your type of patient population?
- Gaps in Care

Gaps in Care

Gaps in care in ambulatory settings refer to instances where patients do not receive the recommended or expected level of care, potentially leading to negative outcomes.

These gaps can arise from various factors, including patient non-adherence, lack of access to care, communication issues, and coordination problems.

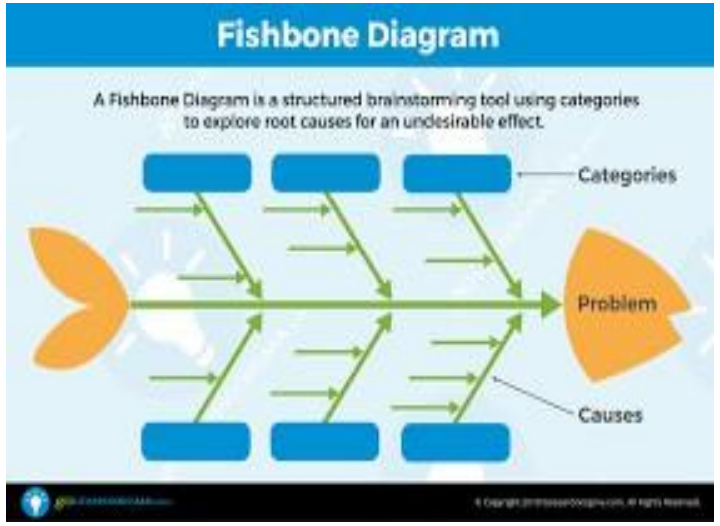
Examples of Gaps in Care

- Patient Non-Adherence:
  - Patients may not take prescribed medications as directed, miss scheduled appointments, or fail to follow through with recommended screenings or tests.
- Lack of Access to Care:
  - This can include transportation barriers, financial constraints, limited availability of specialists, or difficulties finding providers within their insurance network.
- Poor Communication and Coordination:
  - Inadequate communication between primary care physicians and specialists, incomplete information sharing, and lack of coordination across different healthcare providers can lead to missed diagnoses, treatment delays, and preventable adverse events.
- Information Gaps:
  - Patients may not be fully informed about their condition, treatment options, or recommended preventative care.
- Safety Concerns:
  - Some ambulatory settings may lack adequate safety protocols, leading to increased risk of infections or other preventable harm.
- Transition Gaps:
  - Difficulties in transitioning patients between different care settings (e.g., from hospital to home) can lead to disruptions in care.

Error occurs…
How do we determine the root cause?

Figure out "WHY" did this error occur?

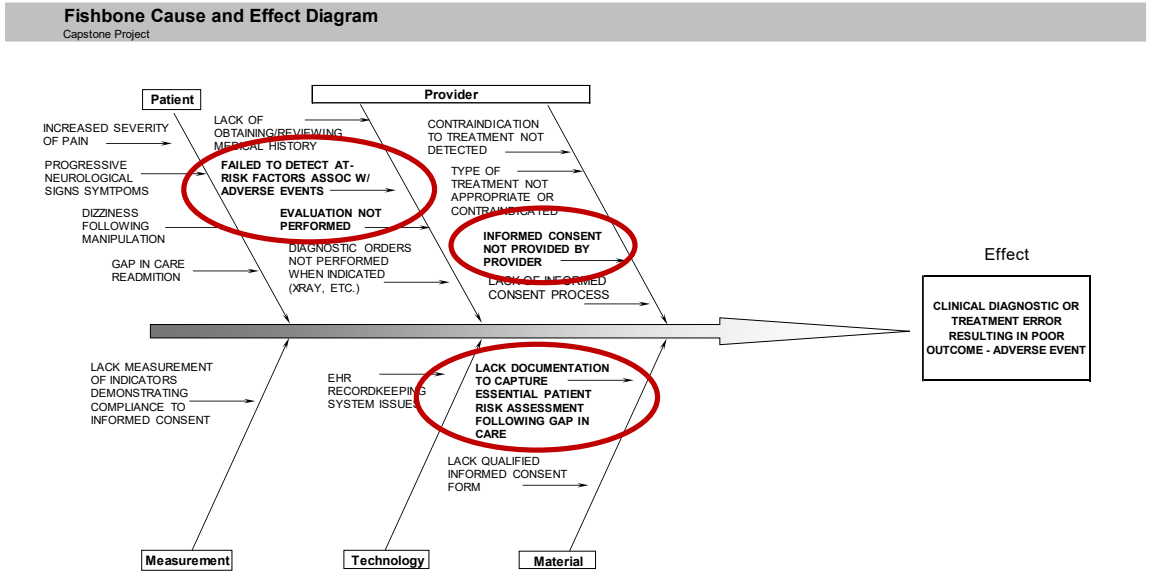
- Recognizing that threats to safety can be complex, and that being able to recognize subtle differences between threats could make the difference between early and late recognition.
- Drilling down to root causes of errors instead of applying a “best practice” fix.
- **Root Cause Analysis (RCA^2)** uses quality tools such as cause and effect diagrams or the “five why” method to isolate and target root causes.



RCA² Summary

- Systematic and thorough search for contributing factors
- Forces one to look beyond the obvious
- Goal is improvement
- Focus is learning, not blaming
- Supports the second victim
- Leads to effective change

Use various methods to assess cause and effect…



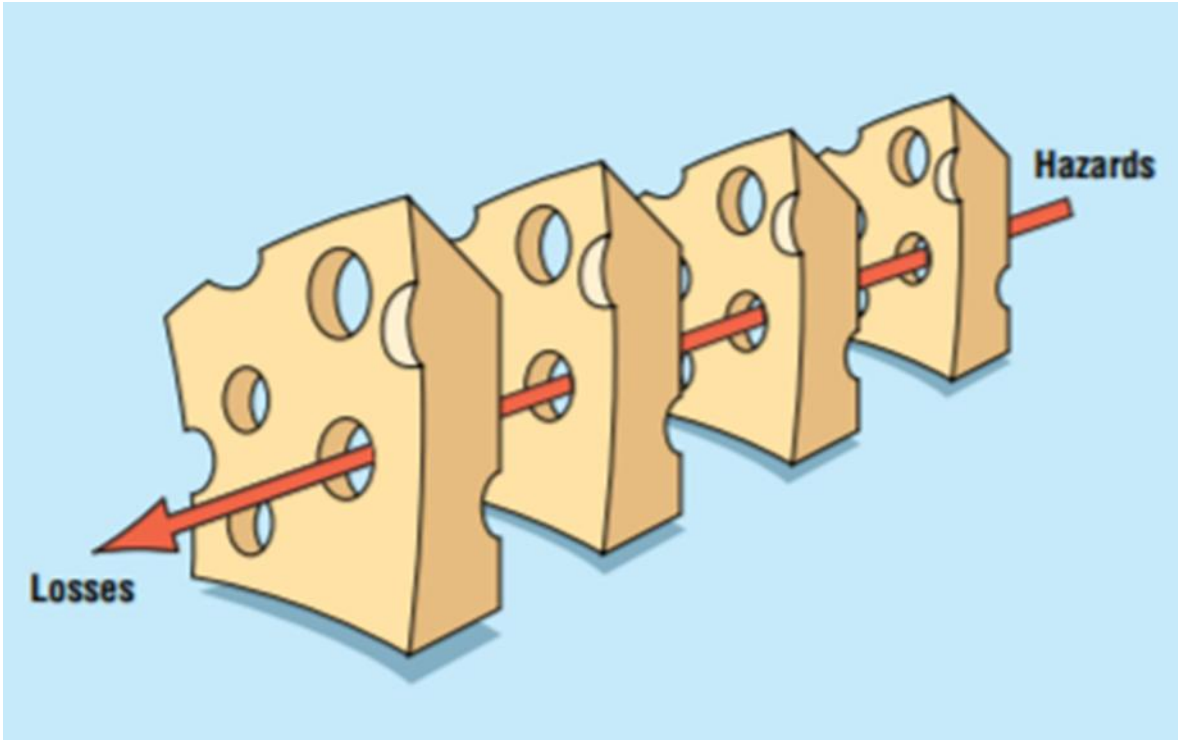
Contributing Factors

No single root cause: Rather, a complex web of causes

Easy and natural for us to focus on the "active failures": Actions that directly caused an adverse event

However, other factors made the active failures more likely to occur: Less obvious, perhaps, but even more important

Defense Layers



What are the defense layers in the practice?

1. Emergency identification/response procedures are in place.
2. Performing vital signs.
3. Properly diagnosis a patient's condition.
4. Identifying contraindications for care and red flags.
5. Perform manipulation procedure properly.
6. Safely apply therapeutic procedures/activities on each visit.
7. Close oversight/response of patient monitoring during care.
8. Close oversight of visitors/children during patient's visit.
9. Awareness of external activities within and outside of the facility.
10. Doctor/Staff rested and devote 100% present time consciousness.
11. Do you have a need to have your x-rays overread by a radiologist?

Corrective Action Planning Hierarchy for Remedial Actions

1. Fix environmental problems
2. Forcing functions and constraints
3. Automation and computerization
4. Protocols, standards and information
5. Independent verification and redundancy
6. Rules and Policies
7. Education and information

B. Thomadsen and S. Lin, Taxonomic Guidance for Remedial Actions. Advances in Patient Safety: vol 2

Approaches to Error

Person – Individuals make errors, break rules and fail to follow procedures

Response: Emphasis on training, disciplinary measures, writing more procedures ie a focus on removing unwarranted variability in human behaviours.

System – Humans are fallible and errors are to be expected. Errors are the consequence of system failures.

Response: Focus on system defenses and safeguards – i.e., changing the conditions under which people work to prevent error.

Human error: models and management

BMJ 2000 ; 320 doi: https://doi.org/10.1136/bmj.320.7237.768
Cite this as: *BMJ* 2000;320:768 James Reason

Let’s focus on preventing Medical Errors…

Types of Medical Errors

- **Diagnostic**
- Treatment
- Preventive

National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

Diagnostic Error

"the failure to establish an accurate and timely explanation of the patient's health problem(s) or communicate that explanation to the patient."

National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

57% of all diagnostic failures occur in ambulatory care settings.

Commonly Misdiagnosed Conditions

The “Big Three”: misdiagnosed cancers (37.8%), vascular events, like stroke and heart attack (22.8%), and infections (13.5%).

Cancers

Lung, breast, colorectal, prostate, and skin cancers

Vascular events

Stroke, heart attack, venous thromboembolism (blood clots in the legs and lungs), aortic aneurysm and rupture (dissection), arterial thromboembolism (a blockage of the blood supply to internal organs)

Infections

Sepsis, meningitis, encephalitis, spinal infection, pneumonia, and endocarditis (a heart infection)

Newman-Toker, D. E., Schaffer, A. C., Yu-Moe, C., Nassery, N., Saber Tehrani, A. S., Clemens, G. D., Wang, Z., Zhu, Y., Fanai, M., & Siegal, D. (2019). Serious misdiagnosis-related harms in malpractice claims: The “Big Three” – vascular events, infections, and cancers, *Diagnosis*, *6*(3), 227-240. doi: https://doi.org/10.1515/dx-2019-0019

Have you ever evaluated a patient who was misdiagnosed?

Have you ever detected a medical emergency on your exam of a patient?

Share your story with us…

Lesson to be learned:

Do Your Own Homework and “Stick to your Guns”

Diagnostic Process: 7 Stages

1. Access and presentation
2. History taking/collection
3. Physical exam
4. Testing
5. Assessment (differential diagnosis)
6. Care planning/referral
7. Follow-up/Outcome Assessment

The Clinical Workflow

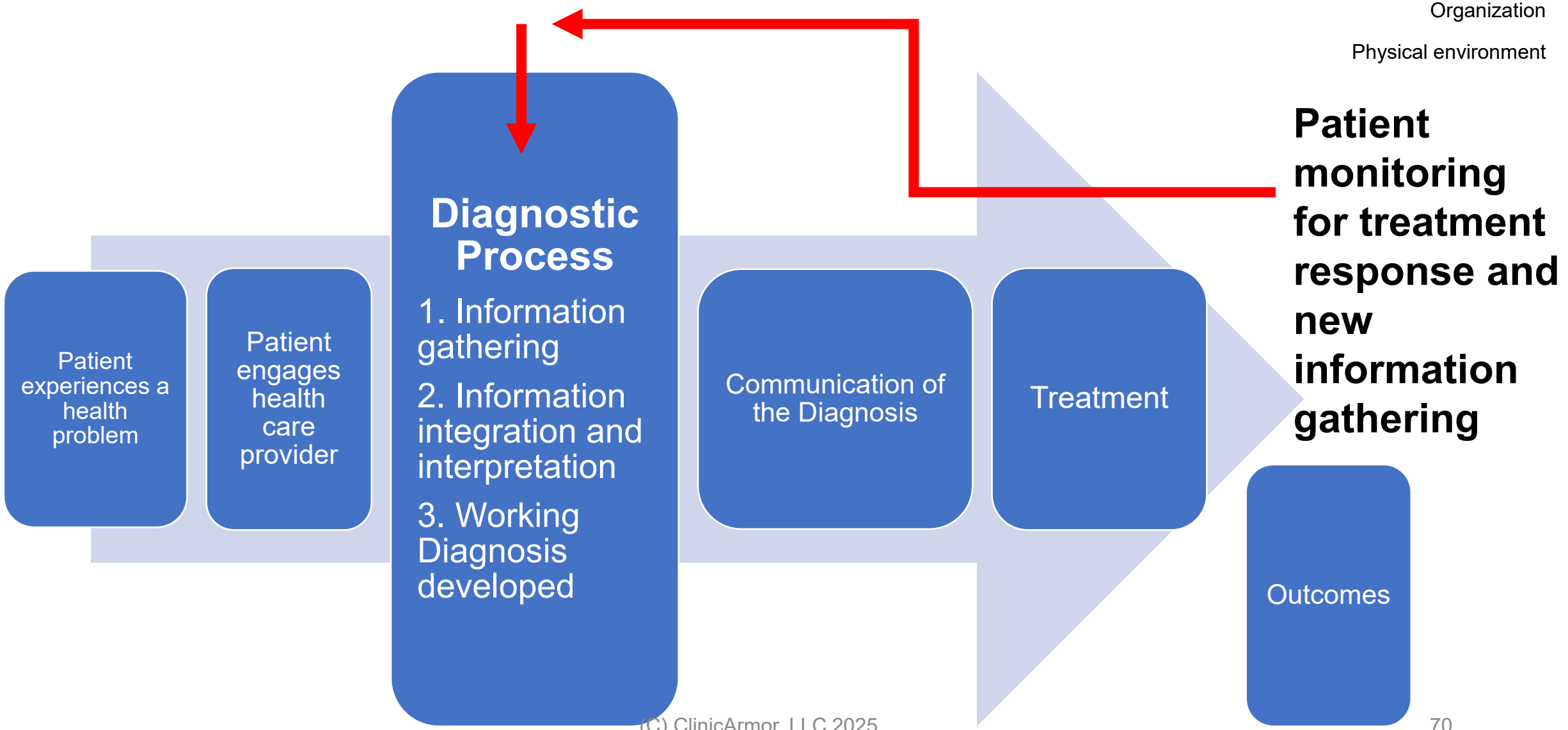
Diagnostic team members

Tasks

Technologies and tools

Organization

Physical environment



Methods for Detecting Failure Across the Diagnostic Process

Work System/Environmental Factors

Common Points of Failure

Work System/Environmental Factors which may produce failure in the Diagnostic Process

1. Information gathering and integration/communication (amount, accuracy, completeness, appropriateness)
2. Technology (EHR is the right fit, full adoption into workflows)
3. Organization and roles of providers and staff
4. Physical space and layout

Common Human Points of Failure in the Diagnostic Process

1. Patient delay in seeking care
2. Failure to gather enough information
3. Failure to integrate the information in medical decision-making process
4. Failure to establish an accurate diagnosis
5. Failure to communicate an explanation/diagnosis to the patient

Standardization is Key

Monitor and adjust to changes, make improvements, build-in check systems.

Key Areas to Improve Diagnostic Performance

- Clinical reasoning
- Teamwork
- Communication with patients, their families, and other health care professionals
- Appropriate use of diagnostic tests and the application of these results on subsequent decision making
- Use of health IT

Clinical Reasoning

Heuristics and Biases
Dual Process Theory

Understand Heuristics and Biases that Influence Decision Making

- **Anchoring:** tendency to “lock” onto features of the initial presentation and failure to adjust this initial impression in light of new information.
- **Affective Bias:** letting our emotions, feelings, and biases affect our judgement.
- **Availability Bias**: tendency to more easily recall certain things that have been seen recently or that are common or impressed upon us.
- **Context Errors:** instances where we misinterpret the situation, leading to an erroneous conclusion.
- **Search Satisficing:** premature closure resulting from accepting the first answer that comes along that explains the facts without considering whether there might be a different or better solution.

Dual Process Theory

Dual Process Theory and Diagnosis

- **System 1**: When a patient presents, the initial data include **typical symptoms and signs of disease** which are recognized. System 1 processing is fast.

- **System 2**: When the symptoms and signs are **atypical and do not become apparent to align with a specific disease pattern**. Repetition of data to System 2 may eventually be recognized as a new pattern and then processed through System 1. System 2 processing is slow, analytical decision making and can override System 1 processing.

Expert clinicians posses better developed mental models of diseases, which support more reliable pattern matching (System 1). Novice clinicians are more likely to rely on analytical reasoning throughout the diagnostic process as compared to experienced clinicians.

What about our staff and the role they can play in preventing diagnostic errors?

Teamwork

- Gathering information is essential
- It takes a team to monitor and screen patients on an ongoing basis…
- Clarify the roles of each team member within the practice and their responsibilities
- Assess their competence within their roles.
- Professionalism
- Clinical Conscientiousness and Situational Awareness

Communication

Providers and staff collaborating with their experience with the patient and communication efforts.

History and Evaluation Process

Now that we understand how to prevent or respond to errors, let’s shift gears and talk about our process for evaluating patients from a clinical perspective

What are the various factors that may set us up for risk of a clinical error in our process of evaluation?

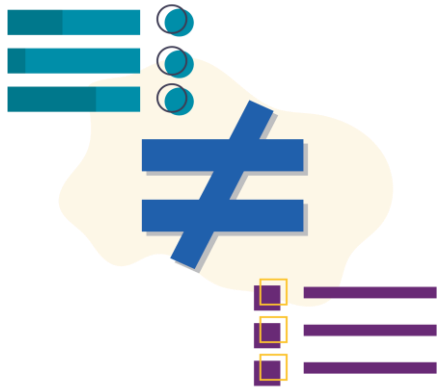
Intake Process

Accurate information from the patient is imperative to gather for clinical decision making.

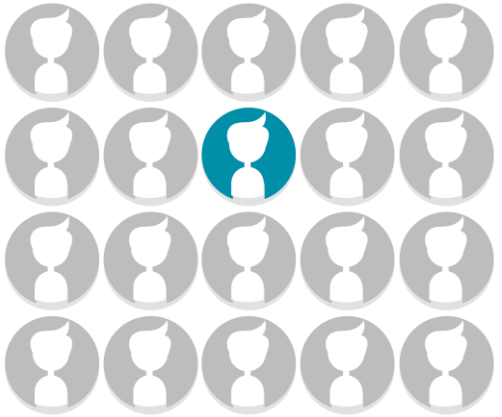
Reasons for Diagnostic Error

Patients are interrupted when telling their illness story to providers within **11-18** seconds.[2,3]

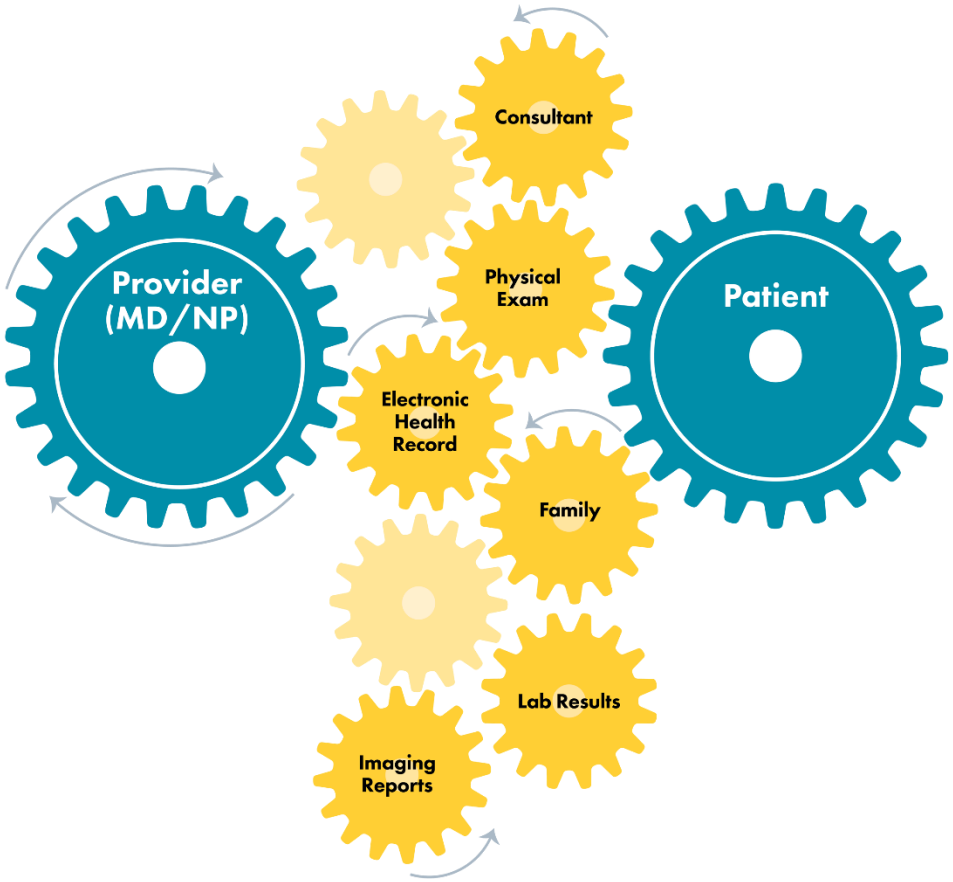
This breakdown in collaborative communication may result in assumptions and premature closure.[4]



These breakdowns lead to diagnostic error in about ***1 of every 20*** patients you see.[5]



How Does 60 Seconds To Improve Diagnostic Safety Work?



Tips for Effective Listening

- Listen for meaning.
- Pay attention to body language.
- Cultivate empathy.
- Avoid making judgments.
- Look into others' eyes when they're speaking.
- Pay attention to the feelings associated with the words.

How can we improve diagnostic safety?

What can patients do?

- ✓ **Tell their story** fully and completely and clearly
- ✓ **Provide accurate information** about their symptoms
- ✓ **Speak up** if they feel they have not been heard
- ✓ **Ask questions** to clarify the information shared
- ✓ **Use a checklist** of tests, symptoms, concerns, or physicians consulted

What can clinicians do?

- ✓ **Listen** to patients
- ✓ **Support patients** in effectively sharing their symptoms.
- ✓ **Ask patients** what they think is going on
- ✓ **Conduct a thorough history** and physical examination
- ✓ **Set** a visit agenda
- ✓ **Know patients** and their history, and read prior notes
- ✓ **Integrate "pre-work"** for patients (e.g. symptoms; history of present illness; labs)

What should we be “Listening” for?

Physical Comorbidities

Past Medical, Family and Social History

- Prior Major Illnesses and Injuries
- Prior Surgeries
- Prior Hospitalizations
- Current Medications
- Allergies
- Age Appropriate Immunization Status

- Age Appropriate Feeding/Dietary Status
- Marital Status
- Current Employment
- Occupational History
- Alcohol and Tobacco Usage
- Level of Education
- Sexual History

- Ask if there are any members of the patient's family who have had illnesses with features similar to the patient's.
- Determine the health or cause of death of the patient's parents and siblings.

- Establish whether there is a history of heart disease, high blood pressure, cancer, tuberculosis, stroke, diabetes, arthritic conditions, thyroid disease, kidney disease, asthma, blood diseases, sexually transmitted diseases, or any familial diseases.

Review of Systems

1. Constitutional
2. Eyes
3. Ears, nose, mouth, throat
4. Cardiovascular
5. Respiratory
6. Gastrointestinal
7. Genitourinary
8. Musculoskeletal
9. Integumentary
10. Neurological
11. Psychiatric
12. Endocrine
13. Hematologic/Lymphatic
14. Allergic/Immunologic

CVA Screening

Has the patient reported any of the following risk factors or symptoms in the medical history?

Is there nausea, vomiting, sensory disturbances (hearing, visual), cramps, weakness, headache, dizziness, and/or loss of consciousness?

Risk Factors:

- Dizziness
- Unsteadiness
- Giddiness
- Vertigo
- Sudden severe pain in the side of the head and/or neck, which is different from any pain the patient has had before
- Age <45 years
- Migraine
- Connective Tissue Disease
- Recent infection (i.e. upper respiratory)

Be aware of patient's at-risk.

Recognize indications and contraindications for common modalities.

Know Red and Yellow Flags, Contraindications, etc.

At-Risk Patient Population

Red Flags, Yellow Flags, CoMorbidities, and Risk Factors

A serious condition that must be recognized through the history and exam process that typically requires referral to another health care provider

Clinical Red Flags

Red Flags

Immediate Referral

1. Fracture/dislocation
   - Significant Trauma
   - Osteoporosis
   - Pathologic Fracture
2. Cancer/tumor
   - Night-time Pain
   - Severe Progressive
   - Unexplained Weight Loss
   - Prior History
3. Infection
   - Elevated Temperature
   - Night Sweats
   - Intravenous Drug Abuse
   - Immunosuppression
4. Vertebrobasilar involvement
5. Instability (including degenerative, surgical or rheumatoid etiologies)
6. Progressive scoliosis
7. Severe osteoporosis
8. Severe hypertension
9. Vertebrobasilar involvement
10. Visceral pathology
11. Inflammatory Arthritides
12. Cauda Equina Syndrome (loss of bladder/bowel function)

A condition that must be recognized thru the history and exam process which requires the DC to be cautious when providing physical medicine to the patient and may require co-management with another health care provider

Cautious Considerations

Cautious Considerations

1. Osteoporosis
2. Congenitally blocked vertebrae
3. Rheumatoid arthritis
4. Seronegative arthropathies
5. Spinal stenosis
6. Spinal instability (i.e. listhesis)
7. A diagnosis of disc herniation or sequestration
8. Previous surgery
9. Use of corticosteroids or Cushing's disease
10. Use of anticoagulant medication
11. Positives on vertebrobasilar testing (if used) other than neurological responses

    (e.g. alternate position for adjustment if position induces a dizziness response)
12. Previous adverse reaction to a specific therapy or therapeutic trial

"Yellow flags" are risk factors associated with chronic pain or disability.

Psychological Yellow Flags

Behavioral Comorbidities

- **Depression**
- History of Trauma/Abuse
- Personality Disorders
- Substance Abuse, Dependence, Addiction
- Opioid Use Disorder
- Anxiety Disorder
- Post Traumatic Stress Disorder
- Coping Skills/Catastrophizing
- Fear Avoidance

Risk Factors with Strong Predictive Ability for developing chronic pain and disability

- Fear avoidance beliefs
- Catastrophizing
- Somatization
- Depressed mood
- Distress and anxiety
- Early disability or decreased function
- High initial pain levels
- Increased age
- Poor general health status
- Non-organic signs
- Secondary gain (occupational, social, family, financial)

Yellow Flag Behaviors

Two or more could suggest substance use disorder

- Deterioration in functioning at work or socially
- Illegal activities—selling medications, forging prescriptions, or buying medications from nonmedical sources
- Using medications in ways other than prescribed (e.g., injecting or snorting medication)
- Multiple reports of lost or stolen prescriptions
- Resistance to change in medications despite adverse effects
- Refusal to comply with random drug screens, call backs, or pill counts
- Concurrent abuse of alcohol or drugs Use of multiple physicians and pharmacies

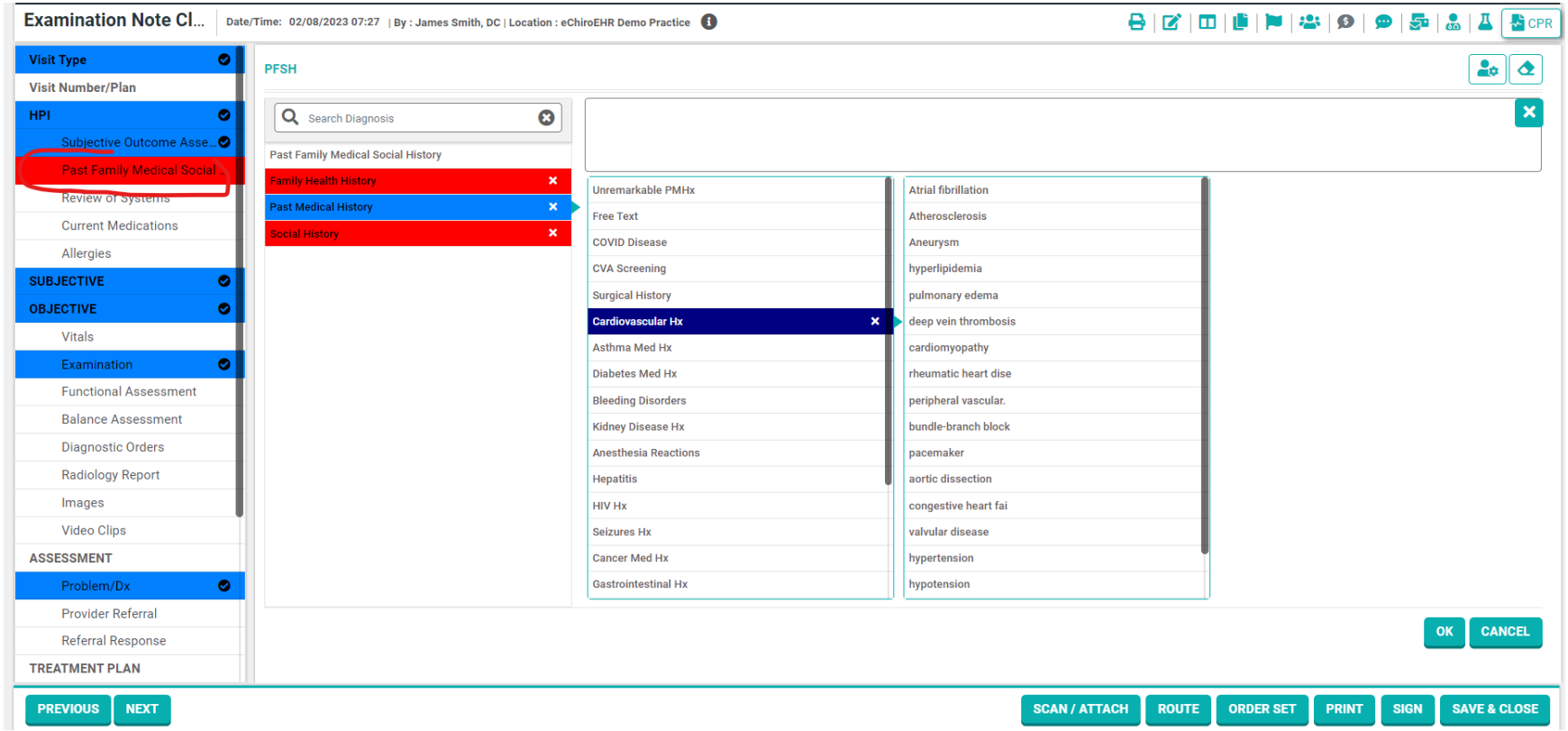
Knowing When to Say When: Transitioning Patients from Opioid Therapy University of Massachusetts Medical School (Massachusetts Consortium) Jeff Baxter, M.D. April 2, 2014

Vulnerable Populations

Diagnosis or treatment is significantly limited by social determinants of health

(i.e., economic and social conditions that influence access to care, etc.)

Document the History of Present Illness



Past Family Medical Social History

Review of Systems

Chief Complaints

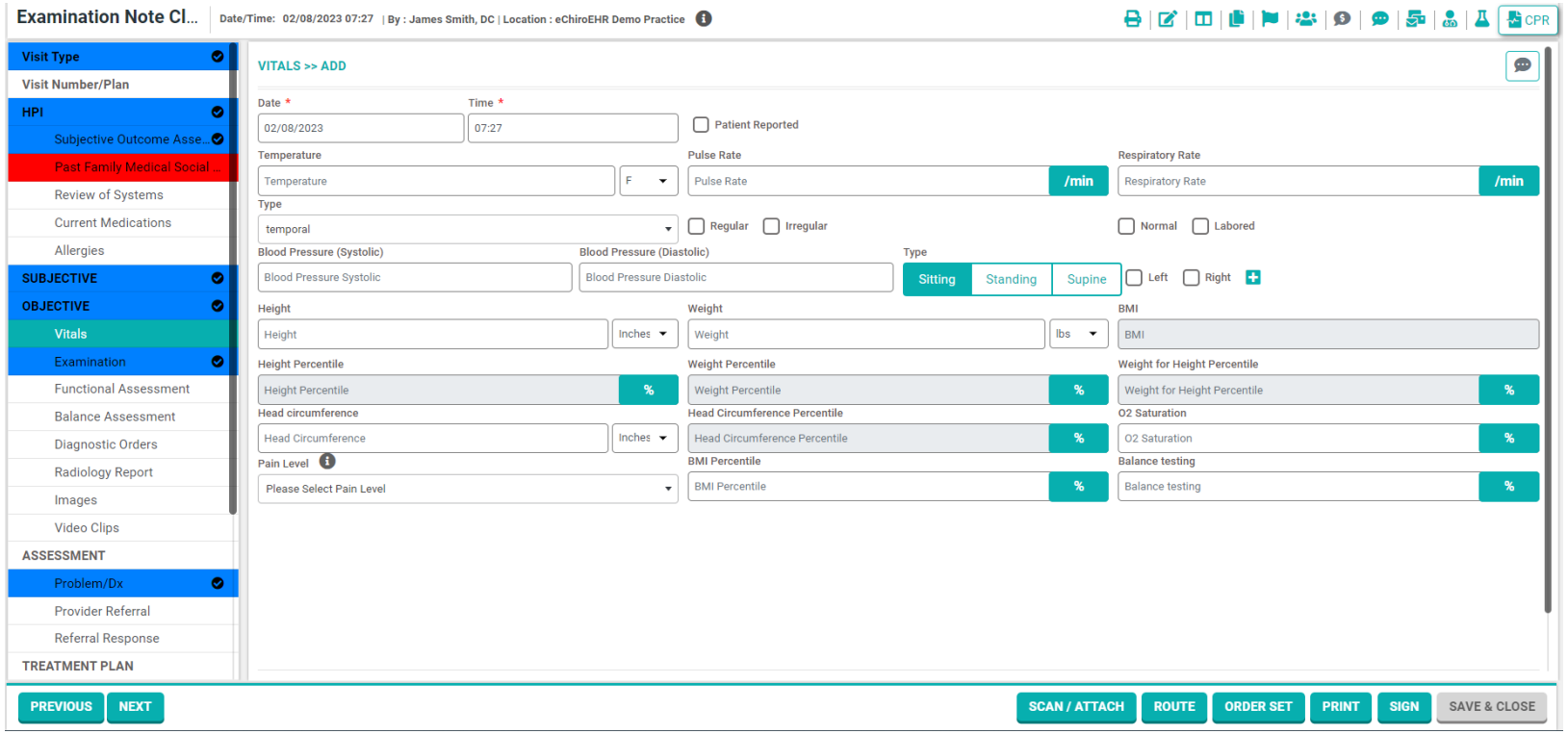
What are Vital Signs?

These are measurements of the inner workings of the human body and how vital organs, such as the heart and lungs, are functioning.

INITIAL EXAMINATION AND RE-EXAMINATION

VITAL SIGNS

- HEIGHT
- WEIGHT
- BMI
- BLOOD PRESSURE
- HEART RATE
- RESPIRATION
- BODY TEMPERATURE



Vitals

- Height
- Weight
  - Abnormal weight loss or gain
  - Rapid change in height
- BMI (calculated from height/weight)
- Temperature
  - Signs of systemic infection or inflammation in the presence of a fever (temp > 101.4 F or sustained temp > 100.4 F. COVID-19 >100F).
- Respirations
  - Varies with age, normal reference range is 16-20 breaths/minute.
- Pulse
  - A newborn or infant can have a heart rate of about 130-150 beats per minute.
  - A toddler's heart will beat about 100-120 times per minute,
  - An older child's heartbeat is around 90-110 beats per minute, adolescents around 80-100 beats per minute, and
  - Adults pulse rate is anywhere between 50 and 80 beats per minute.

Hypertension

- **Normal**

<120 Systolic<80 diastolic medication not needed, lifestyle recommendations

- **Pre-hypertensive**

120-139 systolic 80-89 diastolic, medication not needed, lifestyle modification (90% chance at 65 to develop stage 1 and stage 2, lifestyle changes will decrease risk to almost 0)

- **Stage 1 hypertension**

140-159 systolic or 90-99 diastolic, lifestyle modifications given, medications recommended starting with thiazide-type diuretics (consider others if ineffective)

- **Stage 2 hypertension**

>160 systolic or >100 diastolic, lifestyle modifications given, two-drug combination therapy recommended.

Observation

- Observe the patient as they move thru the office, get in and out of the chair, actions while you are performing their history.
- Document what you see:
  - Walks with a limp
  - Difficulty getting out of chair
  - Appears to be in acute pain
  - Medical emergency

Examination

- Observation
  - Gait Analysis
  - Postural
  - Function
- Palpation
- Range of Motion
- Orthopedic Tests
- Neurologic Evaluation
- Vascular Evaluation
- Visceral Evaluation
- X-ray/Lab Evaluation
- External Imaging or Specialty Referral

Use of Diagnostic Tests

What is clinically indicated based on standard of care?

When is it clinically indicated to perform radiographs or other imaging?

Indications for X-ray

Introduction

Most tests, including radiographs, should have a clinical justification based on an analysis of the risk-to-benefit ratio for the particular individual. If the information gained (i.e., the benefit) outweighs the potential risks from radiation or false negatives/positives, radiographs should be performed.

- Patient age >50 – especially with signs and symptoms of systemic disease
- History of significant trauma
- History of osteoporosis
- History of prolonged corticosteroid use
- Unexpected response to treatment
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer. Remote (>5 years) history of breast cancer
- Significant activity restriction >2 weeks
- Abnormal lab findings with positive signs and symptoms Non-mechanical pain (unable to reproduce symptoms on orthopedic exam)
- Progressive painful structural deformity
- Radicular symptoms
- Visible or palpable structural or functional abnormality
- Suspected scoliosis, especially in pediatric population
- Suspected inflammatory joint disease
- Suspected fracture, dislocation, subluxation
- Suspected spinal instability
- Suspected spinal stenosis
- Pain lasting longer than 6 weeks

ACR–SPR–SSR PRACTICE GUIDELINE FOR THE PERFORMANCE OF RADIOGRAPHY OF THE EXTREMITIES Revised 2013 (Resolution 28)*
ACR–ASSR–SPR–SSR PRACTICE GUIDELINE FOR THE PERFORMANCE OF SPINE RADIOGRAPHY Revised 2012 (Resolution 2)*
Rapid Magnetic Resonance Imaging vs Radiographs for Patients With Low Back Pain: A Randomized Controlled Trial Jeffrey G. Jarvik; William Hollingworth; Brook Martin; et al. 2003;289(21):2810-2818 (doi:10.1001/jama.289.21.2810) JAMA

Categorized List of Indications

Based on pain:

- Lasting longer than 6 weeks
- Bone pain in a person with past history of cancer (esp. colon, breast, prostate, kidney, thyroid)
- Radicular symptoms
- Progressive painful structural deformity
- Non-mechanical pain (unable to reproduce symptoms on focused examination

Based on history:

- Recent (<5 years) history of breast, colon, prostate, kidney, thyroid cancer.
- Remote (>5 years) history of breast cancer
- Significant trauma
- Osteoporosis
- Prolonged corticosteroid use
- Inflammatory joint disease or multisystem disorder

Based on clinical/historical data:

- Age over 50, especially with signs and/or symptoms of systemic disease
- Visible or palpable structural or functional abnormality
- Scoliosis in child or adolescent
- Abnormal lab findings with positive signs and/or symptoms
- Unexpected response to treatment
- Significant activity restriction >2 weeks

Based on clinical suspicion:

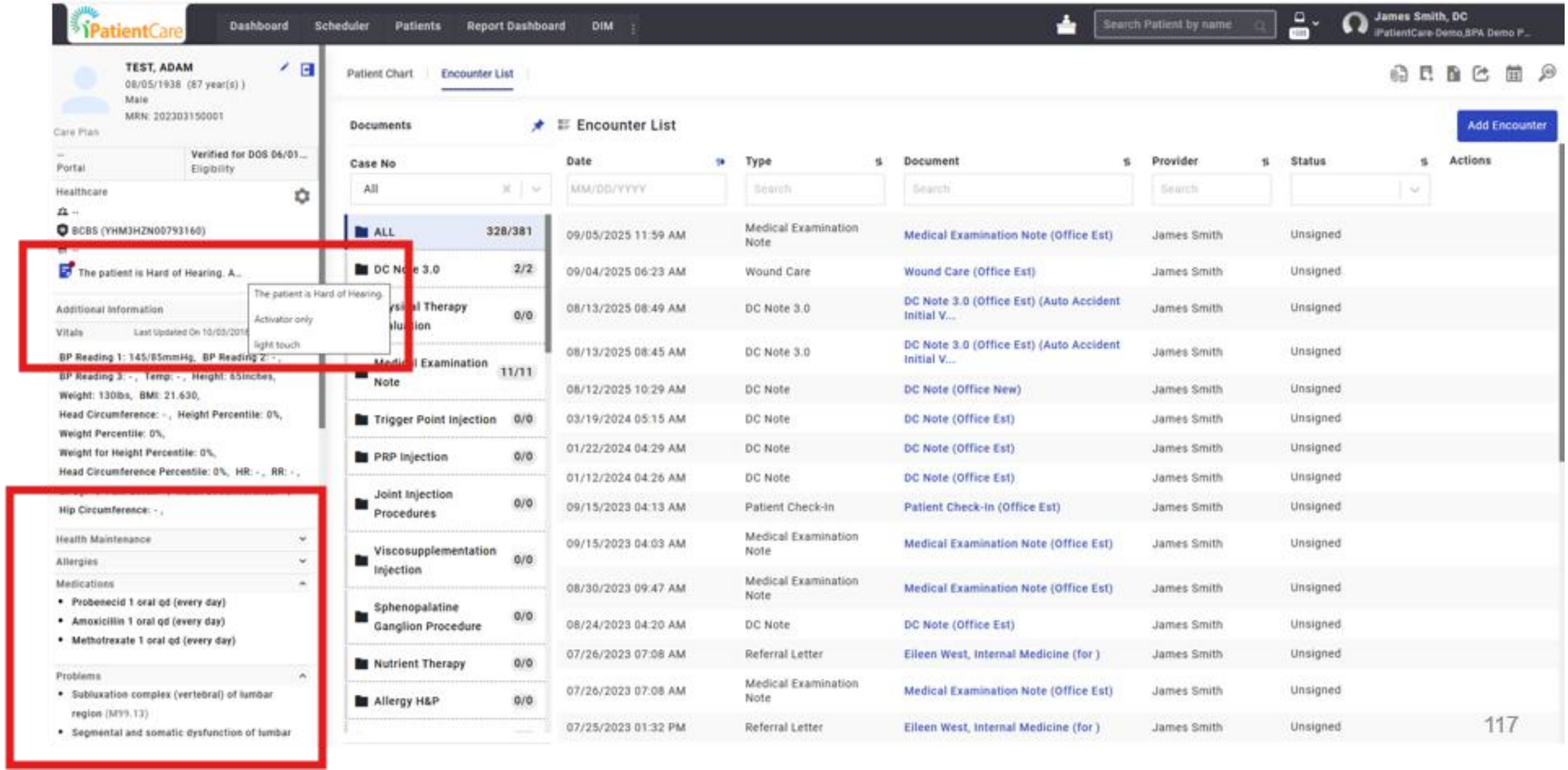
- Fracture, dislocation, subluxation
- Spinal instability
- Spinal stenosis
- Inflammatory joint disease

Advanced Studies

Use of Health IT

Has the practice fully adopted an EHR which meets the compliance and patient documentation, clinical decision-making needs of the type of patient care delivered?

EHR Notifications, flags, alerts, reminders…



Informed Consent

Patient Safety
Informed Consent

Consent by a person to undergo a medical procedure, participate in a clinical trial, or be counseled by a professional such as a social worker or lawyer, after receiving all material information regarding risks, benefits, and alternatives.

informed consent. (n.d.) *The American Heritage® Medical Dictionary*. (2007). Retrieved May 26 2020 from https://medical-dictionary.thefreedictionary.com/informed+consent

Informed Consent Process

Informing patients properly depends upon the sequence and information provided to disclose material risk.

Discussion between the Clinician and the Patient

Obtain the patient's informed consent to the procedures **after** they have been provided material information **and** discussion with the doctor about all of the alternatives or risks of care.

Informed Consent **must be obtained annually** and with new patients as part of the intake procedure and/or upon **re-admit, new diagnosis, new evidence, or new treatment**.

Informed Consent Process

Informed Consent Process

PROCEDURE:

1. Upon patient's check-in, staff provides the unsigned Informed Consent form to the patient following taking the patient's history.
2. Informed Consent is reviewed and discussed with the patient **BY THE CLINICIAN**, at the time of visit, immediately after health history and exam and **prior to treatment and diagnostic procedures**. Any questions the patient may have are answered, always by the clinician.
3. Patient signs and dates form; clinician signs and dates form;
4. Completed form gets turned in to the front desk and gets scanned into patient record – or is signed within the EHR system records directly.

When do we use Informed Consent?

New Patient/Re-Admit

Every new patient and those patients who are re-admitted for care due to a new injury or condition, etc.

New Diagnosis

A new diagnosis for the patient represents a material change for the patient.

New Evidence

New evidence regarding treatment and/or procedures may represent a material change for the patient for consideration of alternative treatment or procedures. New risks for specific treatments/procedures should be updated in the informed consent form as well.

New Treatment Procedure

A change in the use of a procedure in the care of the patient regardless of a change in the diagnosis.

Always take time to discuss the Treatment Procedure Experience

A patient needs to know what is going to happen – what to expect…

Six Key Elements of Informed Consent

For the patient's consent to be valid, the following elements need to be reviewed with the patient:

1. The patient's diagnosis/condition and the proposed treatment, modality or procedures for correction.
2. The relevant risks and benefits of the proposed treatment, modality or procedures
3. Alternative treatment or procedures that are available to the patient and the relative risk, benefits, and uncertainties related to each alternative;
4. The risk and benefits of not receiving or undergoing any treatment procedure
5. The assessment of the patients understanding of the information provided (decision making capacity)
6. The acceptance by the patient to undergo the recommended treatment, modality or procedure.

Informed Consent for Treatment

I understand that the treatment I receive at this clinic is from a licensed Doctor of Chiropractic. Chiropractic scope of practice includes a wide range of services but if the doctor determines the services I need cannot be provided by this office, then he/she will direct me to the appropriate health care provider.

Within the service provided by this office, chiropractic treatment almost always includes the chiropractic adjustment, a specific type of joint manipulation. Spinal manipulation is done to ease pain and help the body function better. Like most health care procedures, the chiropractic adjustment carries with it some risks. Unlike many such procedures, the serious risks associated with the chiropractic adjustment are extremely rare. **The following are the potential risks:**

- **Temporary soreness or increased symptoms or pain** It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- **Dizziness, nausea, flushing** These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- **Fractures** When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- **Disc herniation or prolapse** Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- **Stroke** According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- **Other risks** associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- **Bruising** Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.
- **Alternatives** to manipulation discussed through a shared decision-making process include: Medicines, Physical therapy, Massage, Mobilization, Acupuncture, and/or Cognitive-behavioral therapy. You can do these whether or not you are doing spinal manipulation.
- **Refusing Care** may carry a risk to future capabilities in regard to performing activities of daily living or progression towards chronic pain.

I understand that the practice of chiropractic, like the practice of all healing arts, is not an exact science, and I acknowledge that no guarantee can be given as to the results or outcome of my care. The material risks have been disclosed to me, including a description of those material risks; and after consideration, I agree to the procedures understanding any material risks which are inherent to that procedure.

• PATIENT PLEASE REVIEW • PRINT & SIGN NAME •

I have read or had read to me this informed consent document. I have discussed or been given the opportunity to discuss any questions or concerns with my chiropractor and have had these answered to my satisfaction prior to my signing this informed consent document. I have made my decision voluntarily and freely.

PATIENT'S NAME (Print)_____ **DATE OF BIRTH:** _____

PATIENT GUARDIAN/REPRESENTATIVE (PRINT) _____

_____ _____ _____ _____

(PATIENT GUARDIAN/REPRESENTATIVE SIGNATURE) **(DATE)** **(TRANSLATOR | INTERPRETER SIGNATURE)** **(DATE)**

CLINICIAN ONLY

Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed consent process the patient was:

- ☐ OF LEGAL AGE
- ☐ ORIENTED X3
- ☐ APPEARS UNIMPAIRED
- ☐ FLUENT IN ENGLISH
- ☐ CONSENT GIVEN THROUGH GUARDIAN/PATIENT REPRESENTATIVE
- ☐ ASSISTED BY A TRANSLATOR OR INTERPRETER

_____, D.C. _____

(CLINICIAN SIGNATURE) **(DATE)**

STUDENT INTERN/EXTERN INITIALS AS WITNESS TO PATIENT DISCUSSION WITH CLINICIAN: _____

Informed Consent Form

Six Exceptions of Informed Consent

(1) Detailed technical information that in all probability a patient would not understand.

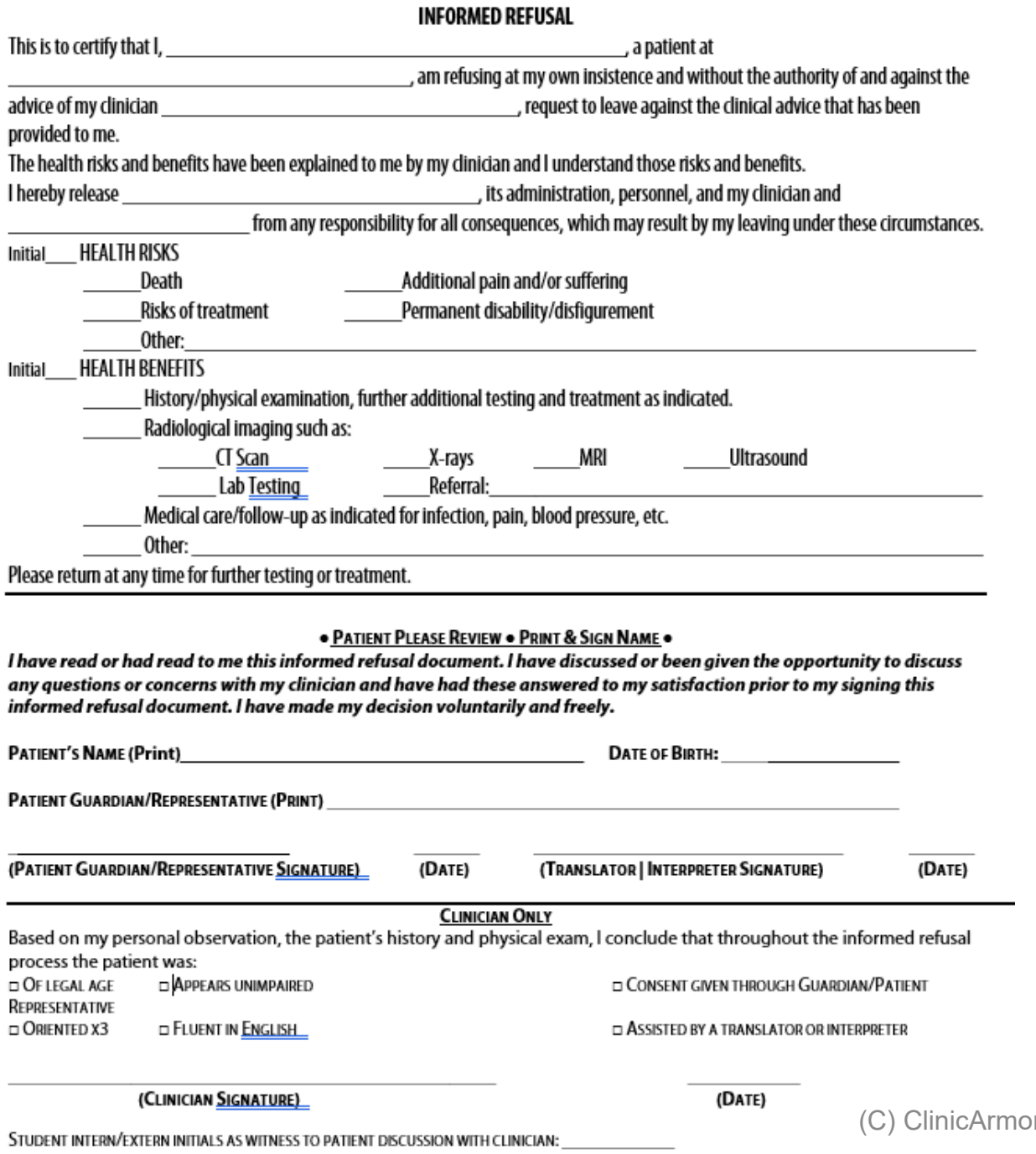
(2) Risks apparent or known to the patient.

(3) **Extremely remote possibilities that might falsely or detrimentally alarm the patient.**

(4) Information in emergencies where failure to provide treatment would be more harmful to the patient than treatment.

(5) Information in cases where the patient is incapable of consenting.

(6) Information about alternate modes of treatment for any condition the chiropractor has not included in his or her diagnosis at the time the chiropractor informs the patient.



INFORMED REFUSAL

This is to certify that I, _____, a patient at _____, am refusing at my own insistence and without the authority of and against the advice of my clinician _____, request to leave against the clinical advice that has been provided to me.

The health risks and benefits have been explained to me by my clinician and I understand those risks and benefits.

I hereby release _____, its administration, personnel, and my clinician and _____ from any responsibility for all consequences, which may result by my leaving under these circumstances.

Initial___ HEALTH RISKS

_____Death _____Additional pain and/or suffering

_____Risks of treatment _____Permanent disability/disfigurement

_____Other:_____

Initial___ HEALTH BENEFITS

_____ History/physical examination, further additional testing and treatment as indicated.

_____ Radiological imaging such as:

_____CT Scan _____X-rays _____MRI _____Ultrasound

_____ Lab Testing _____Referral:_____

_____ Medical care/follow-up as indicated for infection, pain, blood pressure, etc.

_____ Other: _____

Please return at any time for further testing or treatment.

• PATIENT PLEASE REVIEW • PRINT & SIGN NAME •

I have read or had read to me this informed refusal document. I have discussed or been given the opportunity to discuss any questions or concerns with my clinician and have had these answered to my satisfaction prior to my signing this informed refusal document. I have made my decision voluntarily and freely.

PATIENT'S NAME (Print)_____ DATE OF BIRTH: _____

PATIENT GUARDIAN/REPRESENTATIVE (PRINT) _____

_____ _____ _____ _____

(PATIENT GUARDIAN/REPRESENTATIVE SIGNATURE) (DATE) (TRANSLATOR | INTERPRETER SIGNATURE) (DATE)

CLINICIAN ONLY

Based on my personal observation, the patient's history and physical exam, I conclude that throughout the informed refusal process the patient was:

□ OF LEGAL AGE □ APPEARS UNIMPAIRED □ CONSENT GIVEN THROUGH GUARDIAN/PATIENT REPRESENTATIVE

□ ORIENTED X3 □ FLUENT IN ENGLISH □ ASSISTED BY A TRANSLATOR OR INTERPRETER

_____ _____

(CLINICIAN SIGNATURE) (DATE)

STUDENT INTERN/EXTERN INITIALS AS WITNESS TO PATIENT DISCUSSION WITH CLINICIAN: _____

INFORMED REFUSAL

If the patient refuses care or the clinical advice provided, have the patient sign an "Informed Refusal" form, which should provide full disclosure of all possible risks of refusing clinical services and advice before leaving the clinic.

Gap in Care?

Six Weeks or Greater…

Upon initial review of eighteen (18) malpractice claims case studies of established patients returning to the practice following a gap in care of 6 weeks or greater, **there appears to be a direct correlation between no informed consent provided and lack of detecting material change in the patient's condition**.

National Chiropractic Mutual Insurance Company (NCMIC). (2014-2024). Malpractice claims data and case studies: Examiner issues. Retrieved and assessed by Scott Munsterman, DC, FICC, CPCO on February 11, 2025, from https://www.ncmic.com/search-results/?addsearch=examiner%20informed%20consent

Gap in Care?

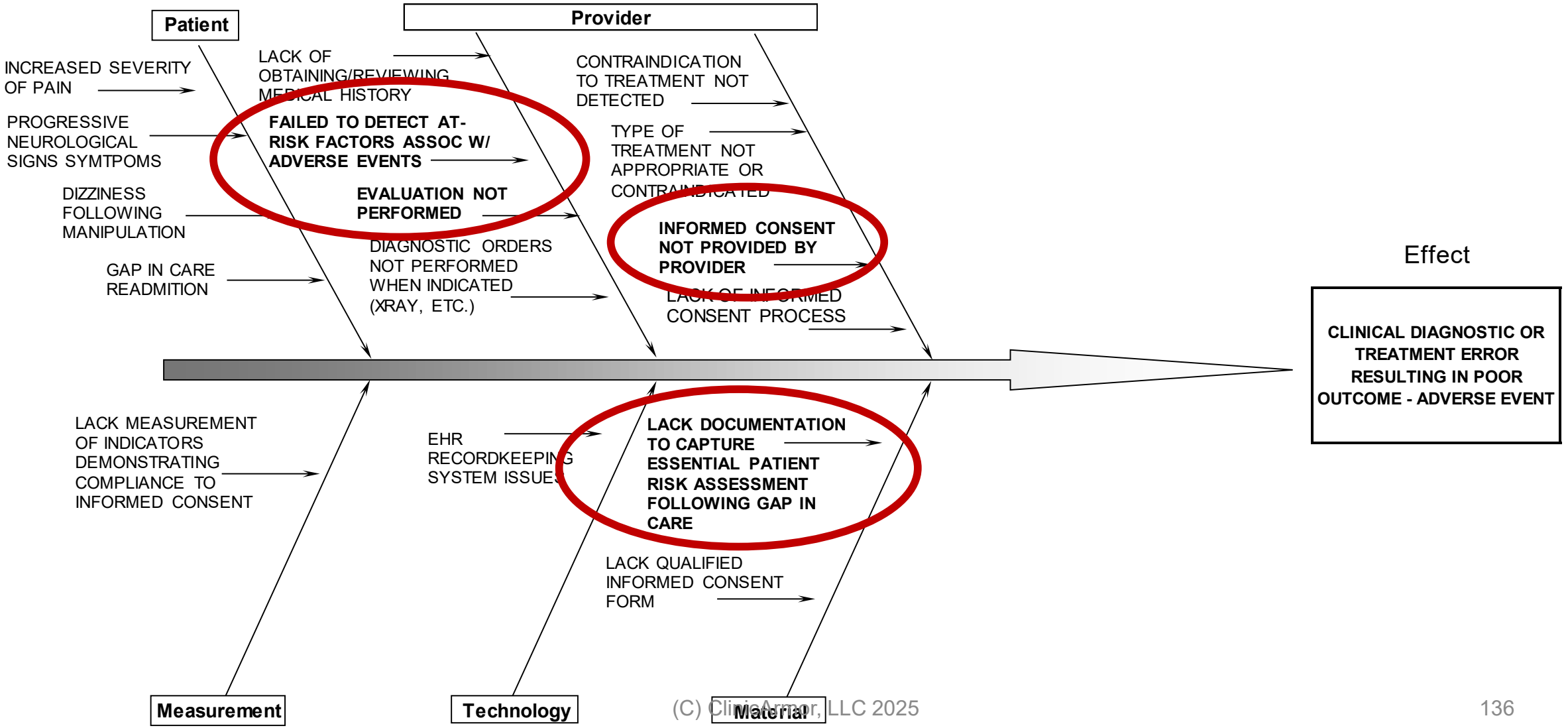
Six Weeks or Greater…

A material change represents a significant deviation from the patient's previous health status, which must be detected to avoid a risk to the patient's safety through misdiagnosis, lack of referral, and/or contraindicated treatment.

The lack of detecting material change in the established patient's condition was also directly associated with a poor or adverse outcome for the patient resulting from either a diagnostic error, treatment error, and/or lack of proper medical referral. Consideration must be given that, if the patient had been informed, a different decision other than what the provider made, may have occurred.

Fishbone Cause and Effect Diagram

Capstone Project



Informed Consent Risk Assessment Form

Please answer the following questions as it pertains to your visit today.

Patient Name: _____ Date: _____

Yes	No	
☐	☐	My pain is much more severe and/or different than it ever has been before and is getting worse.
☐	☐	I have felt unsteady and off balance either causing or almost causing me to fall.
☐	☐	I have recently had a hospitalization or surgery since my last visit.
☐	☐	I am currently taking either pain medication, steroids, Proton Pump Inhibitors, and/or antibiotics.
☐	☐	Something happened to me since my last visit (i.e., accident, fall, etc. – please explain below)
☐	☐	I have had a recent change in my medication or have a new allergy.
☐	☐	My mental processing or thinking doesn't seem very clear or is different to me.

Types of Medical Errors

- Diagnostic
- **Treatment**
- Preventive

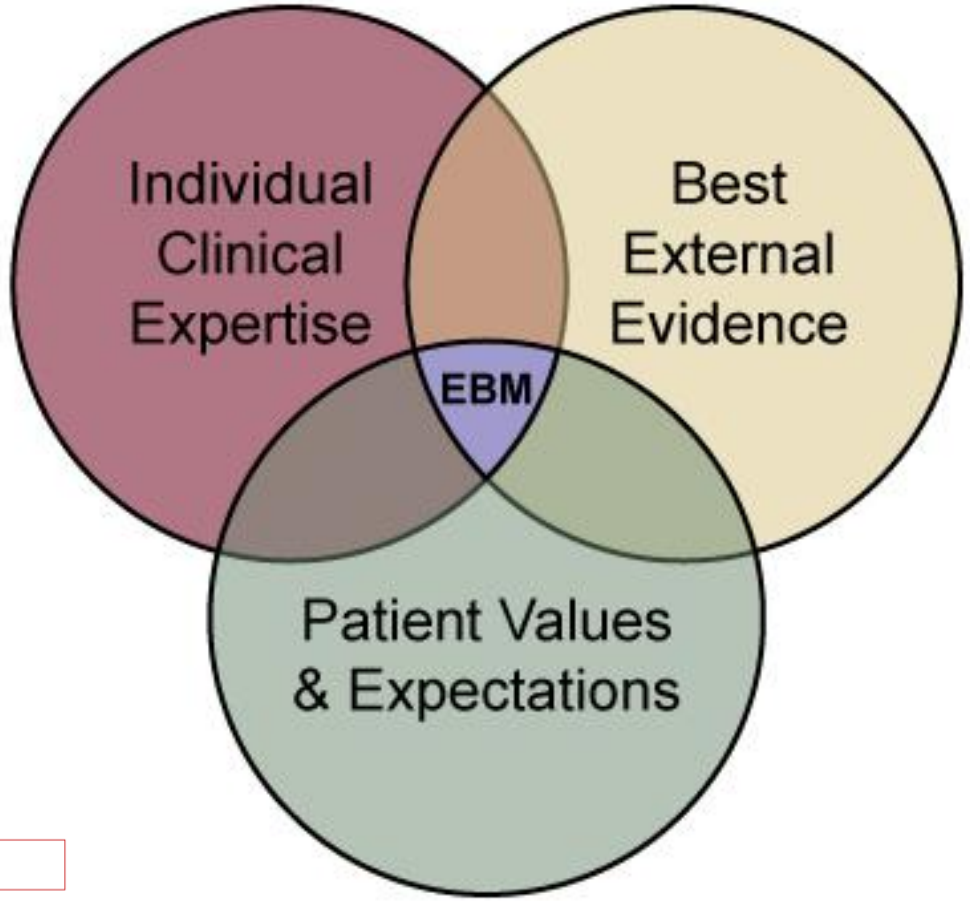
National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

Treatment

Is/was the procedure being performed correctly?

Is equipment (therapeutic modalities, etc.) functioning properly?

Evidence-Informed Practice



The Evidence-based Medicine Triad
Source: Florida State University, College of Medicine.

Braithwaite et al. BMC Medicine (2020) 18:102
https://doi.org/10.1186/s12916-020-01563-4

BMC Medicine

OPINION Open Access

The three numbers you need to know about healthcare: the 60-30-10 Challenge

Jeffrey Braithwaite[1*], Paul Glasziou[2] and Johanna Westbrook[3]

The Patient Safety Challenge

- 10% of care delivered to patients causes harm
- 30% of health care is low value or wasteful
- 60% of care delivered is inconsistent with consensus or evidence-based guidelines

Standard of Care

How does your state licensing board view YOUR responsibilities as a clinician, within the interest of public safety?

Clinical Competencies

Efficacious Treatment Approaches

Competency of Doctor and Staff in delivery of services

Chiropractic Clinical Assistant Competency

- **Understand supervision rules for your state**
  - **Specific CA Certification and Training Requirements**
  - **Doctor's responsibility under his/her license requirements**
- Formal training completion with testing
- Patient response
- Doctor communication - orders

Are you and your staff attending regular clinical education training?

Do you provide hands-on training for staff?

Are you using FDA cleared devices?

Does your treatment follow guidelines?

Are you monitoring and documenting the progress of your patients?

Self-Assessment

Recognizing Patient Safety Incidents

Recognizing Patient Safety Incidents

- Patient complains of pain after treatment
- Modality malfunctioning or not being applied properly
- Patient nearly falling
- Patient safety incidents range from “No Harm” to “Unnecessary Harm”

Misinformed Treatment Plans

Communicating to patients regarding the treatment plan and expectations of care process.

Care Management Considerations

Transitional Care (Hand-off)

Environment/Falls

Medication Errors/Reconciliation

Team/Communication

Dry Needling/Acupuncture Adverse Effects

The act of puncturing the skin comes with a number of predictable adverse events (bruising or bleeding, pain during or following treatment) which commonly occur and are mild in nature.

This may be considered normal side effects of treatment. However, from the patient's perspective they may be considered adverse particularly if the patient has not been educated about the risks associated with their dry needling/acupuncture technique.

https://www.physiotherapyalberta.ca/files/faq_dry_needling_adverse_events.pdf

Manipulation/Manual Therapy

Potential Risks

- ✓ Temporary soreness or increased symptoms or pain It is not uncommon for patients to experience temporary soreness or increased symptoms or pain after the first few treatments.
- ✓ Dizziness, nausea, flushing These symptoms are relatively rare. It is important to notify the doctor if you experience these symptoms during or after your care.
- ✓ Fractures When patients have underlying conditions that weaken bones, like osteoporosis, they may be susceptible to fracture. It is important to notify your doctor if you have been diagnosed with a bone weakening disease or condition. If your doctor detects any such condition while you are under care, you will be informed, and your treatment plan will be modified to minimize risk of fracture.
- ✓ Disc herniation or prolapse Spinal disc conditions like bulges or herniations may worsen even with chiropractic care. It is important to notify your doctor if symptoms change or worsen.
- ✓ Stroke According to the most recent research, there is no evidence of excess risk of stroke associated with chiropractic care. Regarding neck pain and headache symptoms, there is an association between stroke and visits to all provider-types, including primary care medical visits, which may occur before or during the provider visit.
- ✓ Other risks associated with chiropractic treatment include rare burns from physiotherapy devices that produce heat.
- ✓ Bruising Instrument assisted soft tissue manipulation may result in temporary soreness or bruising.

Recognizing and Preventing Safety Hazards

1. Therapy Modalities
2. Hydraulic/Spring-loaded adjusting tables
3. Sharps (i.e. needles) and Sharps Containers
4. Theraband/Exercise Stations

Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment (both, company and employee-owned) used by staff, providers and workforce members at their workplace in good condition?
- Are all of the operating manuals and instructions available to staff, providers and workforce members for all therapeutic modalities and equipment?
- Are staff, providers and workforce members made aware of the hazards caused by faulty or improperly used modalities and equipment?
- Are all cord-connected, electrically operated modalities and equipment effectively grounded or of the approved double insulated type?
- Are children monitored at all times and parent/guardian warned of crush risk or safety issue around modalties?

Therapeutic Modalities and Table Equipment

- Are all therapeutic modalities and equipment turned off after use and remain off prior to patient use?
- Do patients know what to expect prior to the application of the modality?
- Do patients know what to expect as potential temporary symptoms or reactions to the application of the therapy?

Theraband Exercise Station

Eye Protection

Co-Management, Consult, and Referrals

Co-Management, Consult, and Referral Scenarios

Single Visit Consultation: A clinician decides a patient may need to seek another opinion. The referral clinician consults and evaluates the patient and then reports back to the patient and referring clinician the results of the visit.

Co-Management with Shared Care: This results when both the referring and referral clinicians decide there is benefit for the patient to combine their care plan and management, sharing the management of the patient by overseeing the scope of their treatment for the patient; but with communication between both clinicians regarding status of each care plan and response.

Co-Management with Principal Care: One of the clinicians involved becomes the captain of the team-based care model and is assigned the primary responsibility for the patient. The captain directs the care plan, involving other clinicians and providers in the process and delivery of care.

Transition of Care (for whole-person care): A clinician becomes responsible for the patient's whole care when a referral is made, transitioning the full responsibility of care to the referral clinician.

Co-Management, Consult, and Referral Scenarios

1. Single Visit Consultation
2. Co-Management with Shared Care
3. Co-Management with Principal Care
4. Transition of Care for whole-person care
5. Communication of results to patient/family/caregiver

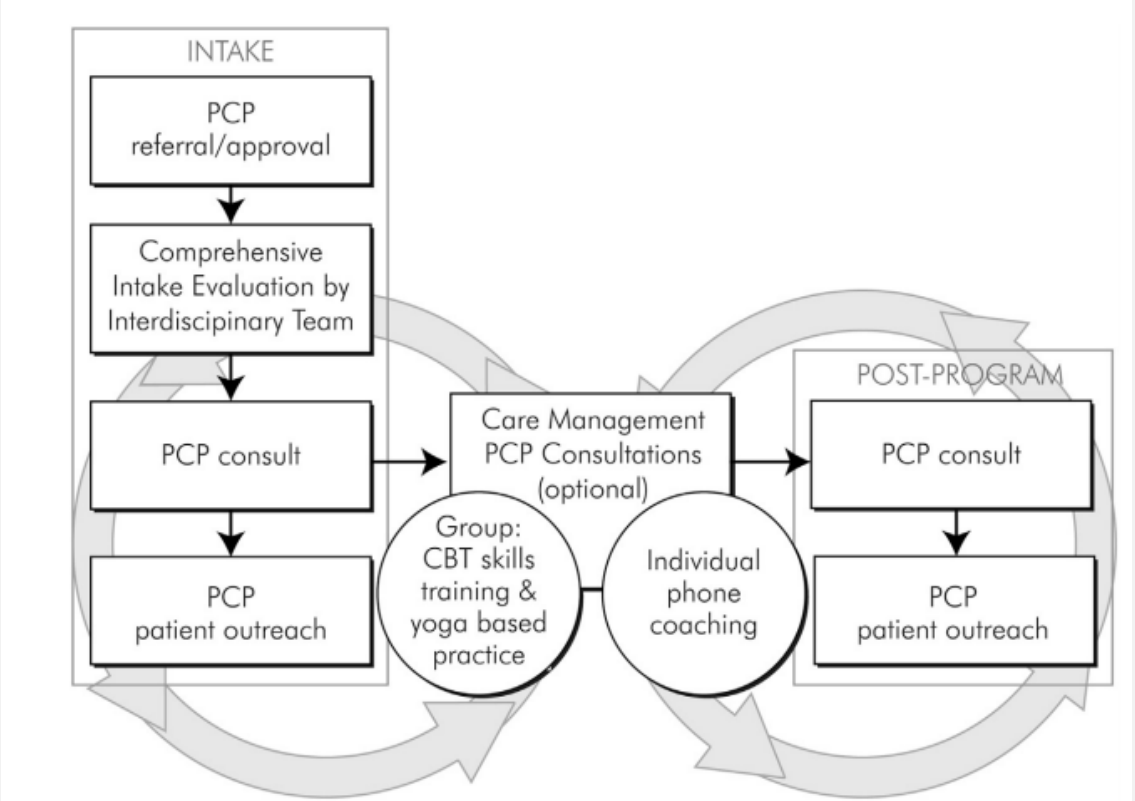


Fig. 2. PPACT intervention description.

https://www.contemporaryclinicaltrials.com/article/S1551-7144(17)30578-5/pdf

1. Know who you need to work with on the care team.

2. Determine what services you want the consult/referral provider to perform.

3. Organize your clinical data logically in a consult/referral letter.

4. Document your referral in the patient’s chart

5. Track the referral to close the loop.

Tracking the Consult or Referral and Closing the Loop

Types of Medical Errors

- Diagnostic
- Treatment
- **Preventive**

National Academies of Sciences, Engineering, and Medicine. 2015. *Improving diagnosis in health care*. Washington, DC: The National Academies Press.

Preventive: Ongoing Assessment

Think about these things…

Professional Boundaries in Clinical Practice

Patient Relationships

Professional boundaries are limits which protect a worker's professional power and their patient's vulnerability. Successful and ethical working relationships are based on a clear understanding of what the workers' role is – and just as importantly – what their role isn’t.

Definition of Professional Boundary

https://mcarthur.com.au/media/1429/understanding-professional-boundaries.pdf

When does Clinical Integrity become compromised?

THE ROLE	THE LINE	THE IMPACT
Professional Service Social Interaction		
Mutual Friendship	BOUNDARY CROSSING	CONSCIENTIOUSNESS OF BOUNDARY VIOLATION PENDING
Close Friendship Family Intimacy	BOUNDARY VIOLATION	PERSONAL GAIN EMOTIONAL DEPENDENCY VIEWED AS EXPLOITATION IF PROFESSIONAL ROLE IS CONTINUED

What is our role as a health care professional?

- Perform clinical duties and provide care to a patient
- Protect the patient from harm
- Meet reasonable expectations of the patient
  - Respect and dignity
  - Provide competent care
  - Practice ethically
  - Uphold confidentiality
  - Comply with all laws regulating your practice and behaviors
- Honesty in all patient interactions
- Equitable and fair treatment of all patients regardless of their race, religion, socioeconomic status, etc.

Has your allegiance shifted away from your focus in your professional role to a more personal role whereby you are seeking and benefiting personally from the relationship?

How are you providing leadership in your practice?

Leadership:

- Leadership is focused on quality within the organization
- “Collective mindfulness” towards quality and safety is cultivated with all staff and providers
- Always looking for a way to improve quality of patient experience

Excerpted from Chassin and Loeb, High Reliability Health Care: Getting there from Here, *The Joint Commission*, 2013.

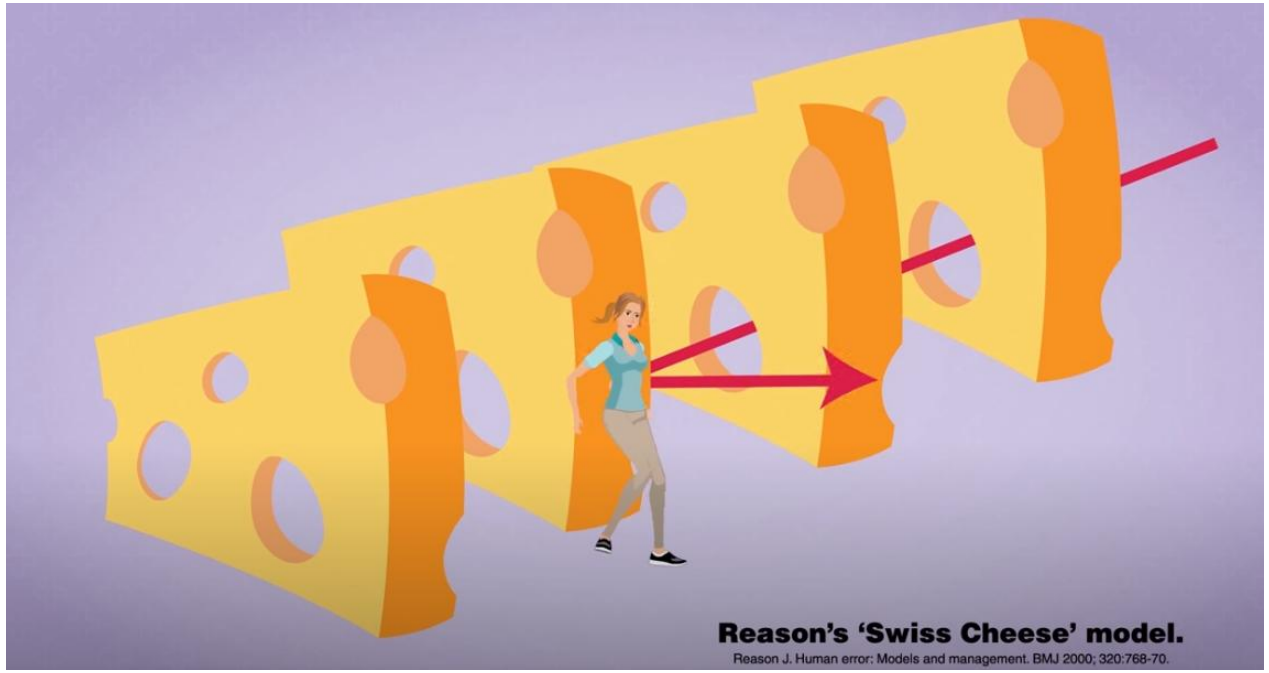
Principles of High Reliability

- **Preoccupation with Failure:** High Reliable Organization's are never satisfied they have not had an accident in many months or years and are **always alert to the smallest signal** that a new threat may be developing.
- **Resistance to the Simplification of Observations and Experiences:** Resisting a "one-size fits all" approach to fixing a problem, using tools to **understand the root cause of a failure**.
- **Sensitivity to Operations:** All staff in operations feel **free to speak up** and report any deviations from expected performance.
- **Commitment to Resilience:** A High Reliable Organization has the **ability to recognize errors quickly and contain them**. Recognizes that despite best efforts, errors will occur, but errors do not disable the organization.
- **Deference to Expertise:** When confronted by a new threat, HRO's have mechanisms in place to identify the **individuals with the greatest expertise** in the issue and involve them in the solution.

Excerpted from Chassin and Loeb, High Reliability Health Care: Getting there from Here, *The Joint Commission,* 2013.

Implement and Improve your Defense Layers

You and your staff must be the “**one thing**”…



Determine the defense layers in your practice:

1. Emergency identification/response procedures are in place.
2. Performing vital signs.
3. Properly diagnosis a patient's condition.
4. Identifying contraindications for care and red flags.
5. Perform manipulation procedure properly.
6. Safely apply therapeutic procedures/activities on each visit.
7. Close oversight/response of patient monitoring during care.
8. Close oversight of visitors/children during patient's visit.
9. Awareness of external activities within and outside of the facility.
10. Doctor/Staff rested and devote 100% present time consciousness.
11. Do you have a need to have your x-rays overread by a radiologist?

Develop a plan and system to guide doctors and staff…

Why do Improvement Initiatives Fail?

- Failure of Will: No one really sees the need for change
- Failure of Ideas: People want change, but don't have realistic improvement solutions
- Failure of Execution: There are good improvement solutions that are not implemented effectively

An organization must overcome all three challenges to successfully make and sustain change!

Source: Don Berwick, Institute for Healthcare Improvement

Example of a systematic way of addressing patient safety…

Welcome
Ask
Listen
Knowledge

The “Walk”

Screening Patients:

Why are you here today?

Has there been a change in how you are feeling since your last visit?

Have you seen anyone else about your health?

Do you have questions about...

Are you worried about your health?

Situational Awareness:

No change or worsening

Observation of patient's mental status, behaviors, etc.

Has there been a "Significant Event"?

Does the patient's clinical presentation require urgent need for evaluation and/or care?

The doctor must be informed of any new information about the patient that has been related to staff.

Stay Connected to Established Patients who are under a treatment plan.

Following the treatment plan, evidence-informed care guidelines, and the patient's response to care...

Screening Patients

Monitor changes since the last visit

No change or worsening

Observation of patient's behaviors and characteristics

Informed Consent Risk Assessment Form

Please answer the following questions as it pertains to your visit today.

Patient Name: _____ Date: _____

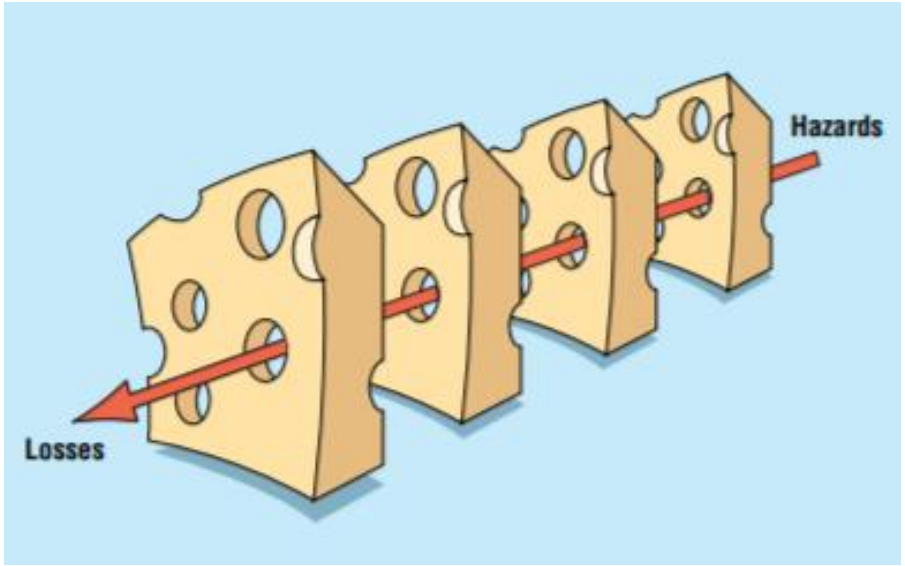
Yes	No	
☐	☐	My pain is much more severe and/or different than it ever has been before and is getting worse.
☐	☐	I have felt unsteady and off balance either causing or almost causing me to fall.
☐	☐	I have recently had a hospitalization or surgery since my last visit.
☐	☐	I am currently taking either pain medication, steroids, Proton Pump Inhibitors, and/or antibiotics.
☐	☐	Something happened to me since my last visit (i.e., accident, fall, etc. – please explain below)
☐	☐	I have had a recent change in my medication or have a new allergy.
☐	☐	My mental processing or thinking doesn't seem very clear or is different to me.

Has there been a “Significant Event”?

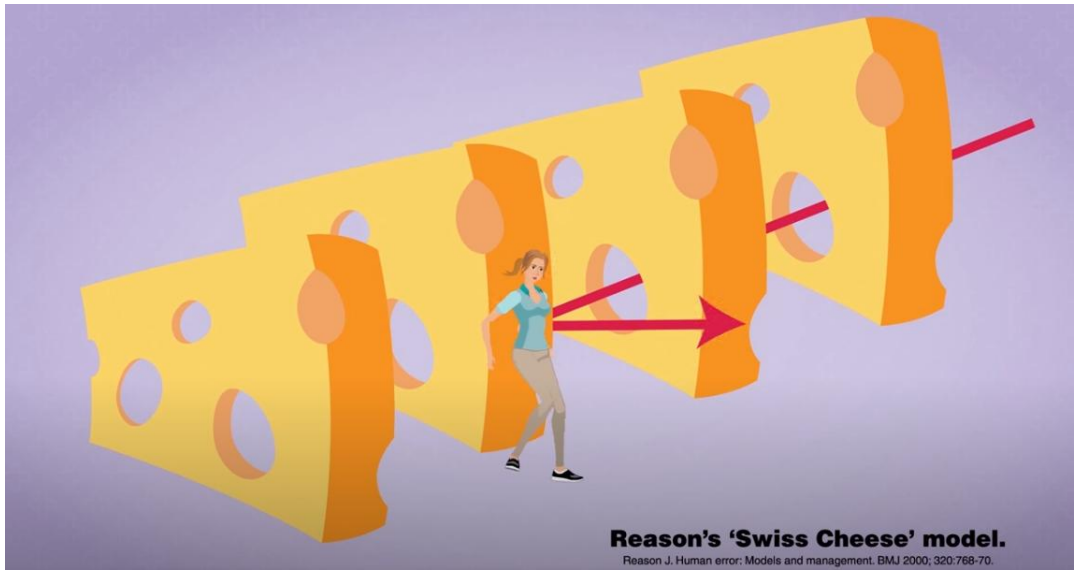
If an incident does occur, then…

- The incident should not be kept secret. All incidents need to be documented and discussed with your professional liability insurer – and then with other providers and staff.
- The doctor should talk to the patient (if recommended by your professional liability insurer):
  - Discuss what has been learned
  - Provide an honest expression of regret or apology
  - Can often decrease the risk of legal action

It just takes one thing to block the incident…



https://www.youtube.com/watch?v=7Y8HupZ2e0s&feature=youtu.be



Thank you!

Scott Munsterman, DC, FICC, CPCO

Info@ClinicArmor.com