



มหาวิทยาลัยมหิดล

คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี Faculty of Medicine Ramathibodi Hospital, Mahidol University



Safety Culture

รองศาสตราจารย์ชั้นยี่ สุภัทรพันธุ์

รองคณบดีฝ่ายบริการ

คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี

Health Care Risk

Health care system is the complex system, Hospitals must manage multiple health system drivers

Technology Risk

Organization Risk

Hospital Risk

Process Risk

Human Risk

Change Many – to – One Relationship

Yesterday

1 : 1



Today

Many : 1

- Relationships
- Information
- Shared Aim
- Knowledge
- Context
- Change
- Value

From Value by Design
(2011)



Complex adaptive system (CAS) = Freedom to act in ways that are not always predictable , and whose actions are interconnected so that one agent's actions change the context for other agents

From “complexity sciences” by Zimmerman and colleagues.



Simple , Complicated , Complex Framework

Simple “Yes / No”	Complicated “If, then...”	Complex “? Maybe”
Known Elements	Element are Knowable	Element partly known , unit they can change
Predictable outcome	Largely Predictable outcome	Essentially unpredictable
Check list or forcing function	Algorithm – driven structured orders , decision making	Shared aim , relationship
Culture before ATB	ATB tolerance / Intolerance	Co - morbidities , Payer situation
Low provider autonomy	Variable Provider autonomy	High provider autonomy
Aim : Reliability	Aim : Reliability	Aim : Resiliency



**Health care today harms too frequently
and routinely fails to deliver its potential
benefits. It lies not just a gap but a chasm**

The Institute of Medicine 2001



TO ERR IS HUMAN

: Building a safer health system

The Institute of Medicine 1999

**N.B Safety is providing care and services in a manner that
minimizes the risk of avoidable harms**



The Patho Physiology of Error

“Cognitive Theory” By James Reason : 2 Types of mental functioning

1. Autonomic and Unconscious function : Schemata = Informational variables / slots เช่น อาน้ำ แปรงฟัน ขับรถไปทำงาน
2. Conscious and deliberate function : Slow, Sequential , Laborious



“A Model of Error” By Rasmussen : 3 levels of human performance

First level : **SKILL-BASED** = Unconscious, schemata – based activities

เช่น ลืมปิดไฟ , ลืมกุญแจ , ลืมของ

Second level : **RULE-BASED** = We try to match patterns from previous experience

การเดินทางที่เดิมในวันเสาร์-อาทิตย์

Third level : **KNOWLEDGE-BASED** = Slow, laborious, analytic process

เช่น วินิจฉัยผิด

The meaning of ERRORS

1. Malfunctioning schemata at the unconscious level (Skill based or rule – based) $\Rightarrow$ SLIPS OR LAPSES
(The plan is correct but the actions fail)
2. Misjudgment at the conscious level (rule based or knowledge – based) $\Rightarrow$ mistakes (The plan is incorrect)



The causes of Human ERRORS

1. “Personal” Interruptions = multitasking, fear, stress, anger, fatigue, alcohol.
2. “Environmental” Interruption = noise, heat, unusual stimuli, lack of visibility.
3. Lack of knowledge and accurate information.

Latent Conditions and Active Failures

Latent Conditions

Active Failures

Policies

Technologies

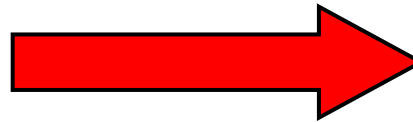
Equipment

Training gaps

Staff storages

Improper staffs

Poor safety culture



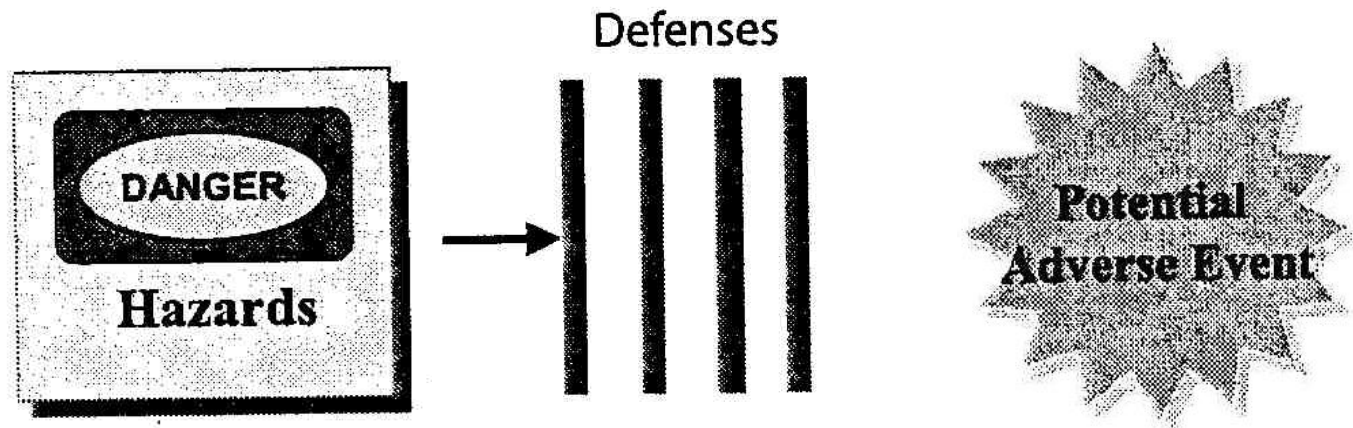
**Errors by doctors,
nurses, pharmacists**



Summary

Eliminating or minimizing latent conditions has a greater impact on human error than focusing on an individual active failure.

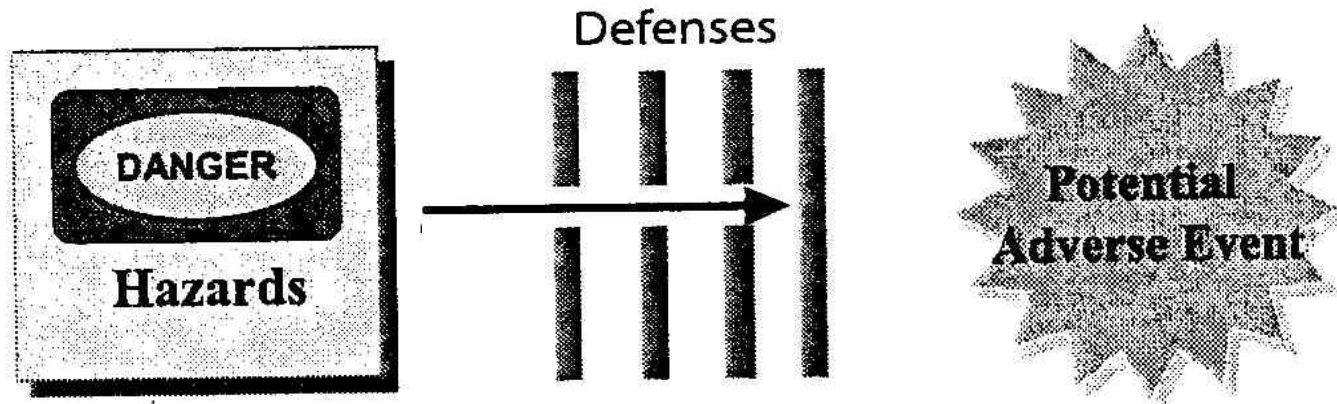
Chapter 1 : An Overview of Patient Safety and Its Impact on Facility design



Hazards are inherent in health care – it's part of “the business.”

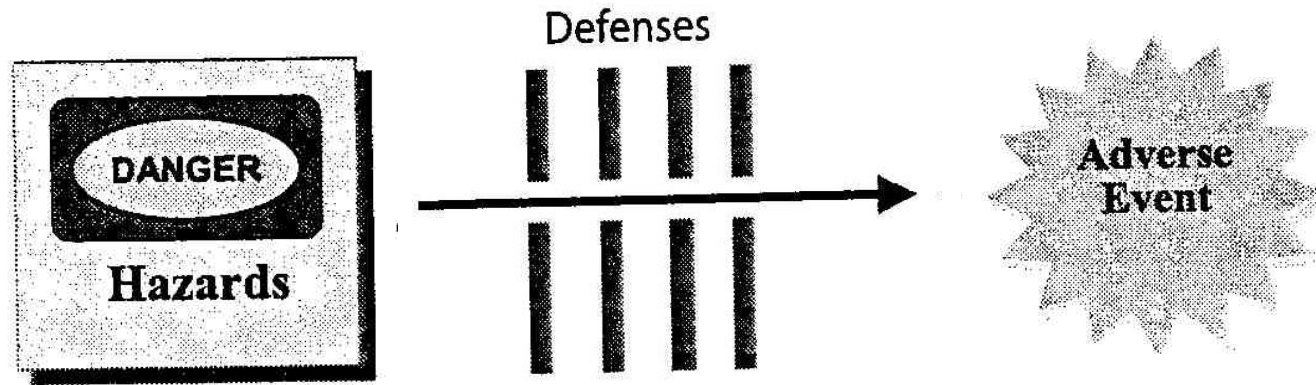
Defenses can be hardware (e.g., monitors), people (e.g., nurses), or administrative (e.g., acceptable protocols)

(From Managing the Risks of Organizational Accidents, Reason, 1997)



Usually several defenses must fail to cause an accident-
Just one remaining intact is enough to prevent a near
miss becoming an accident...

Safe by Design: Designing Safety in Health Care Facilities, Processes, and Culture



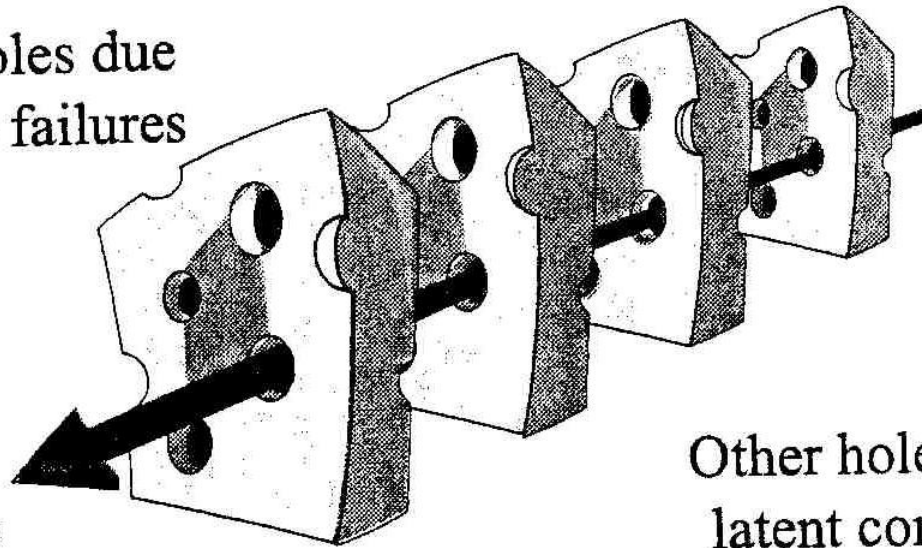
What is “the cause”? The hazard? Failure of which defense?

This is the problem with assigning single causes...

Blame/cause often is assigned to the last barrier – usually a person – to fail!!

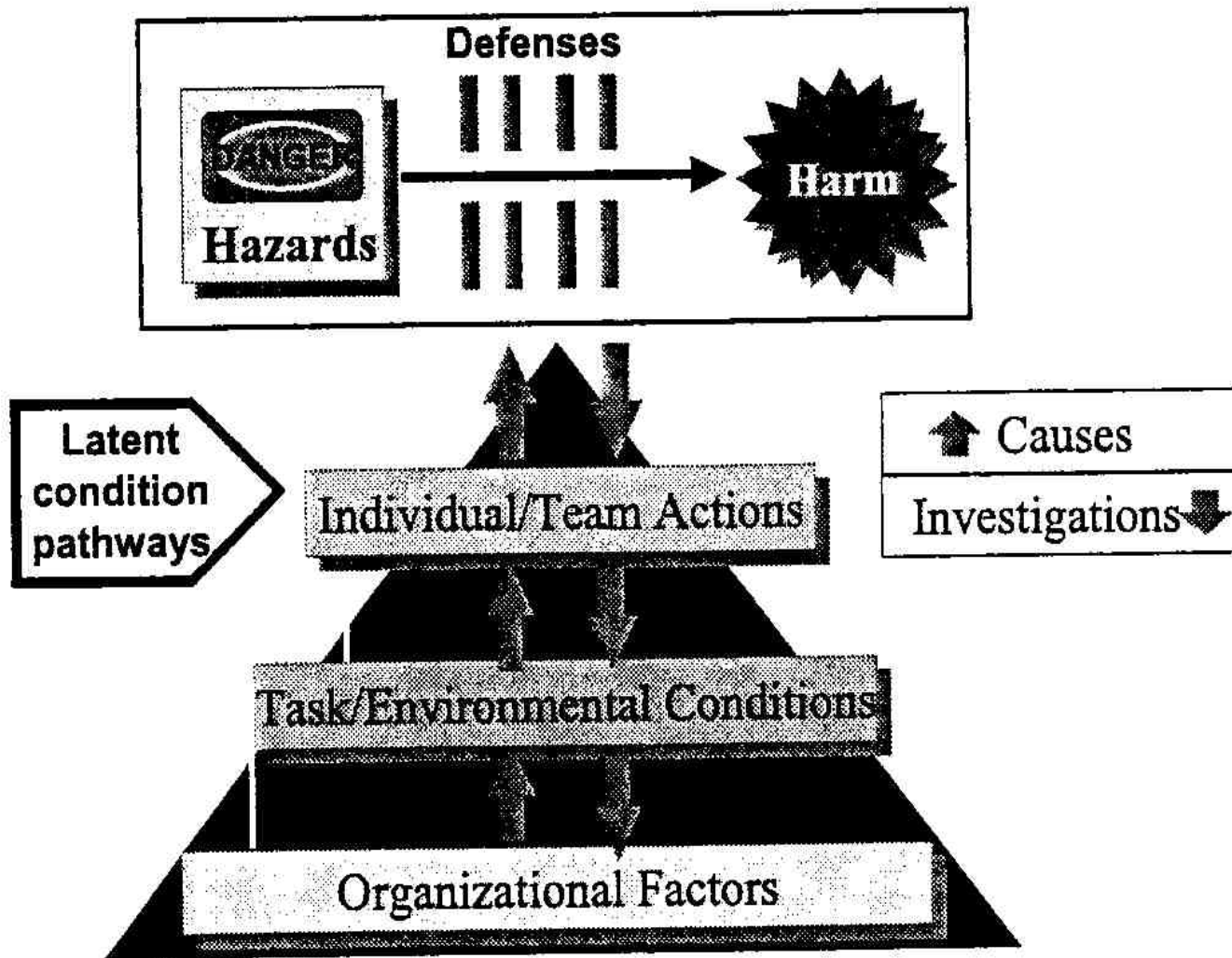
Some holes due
to active failures

Harm

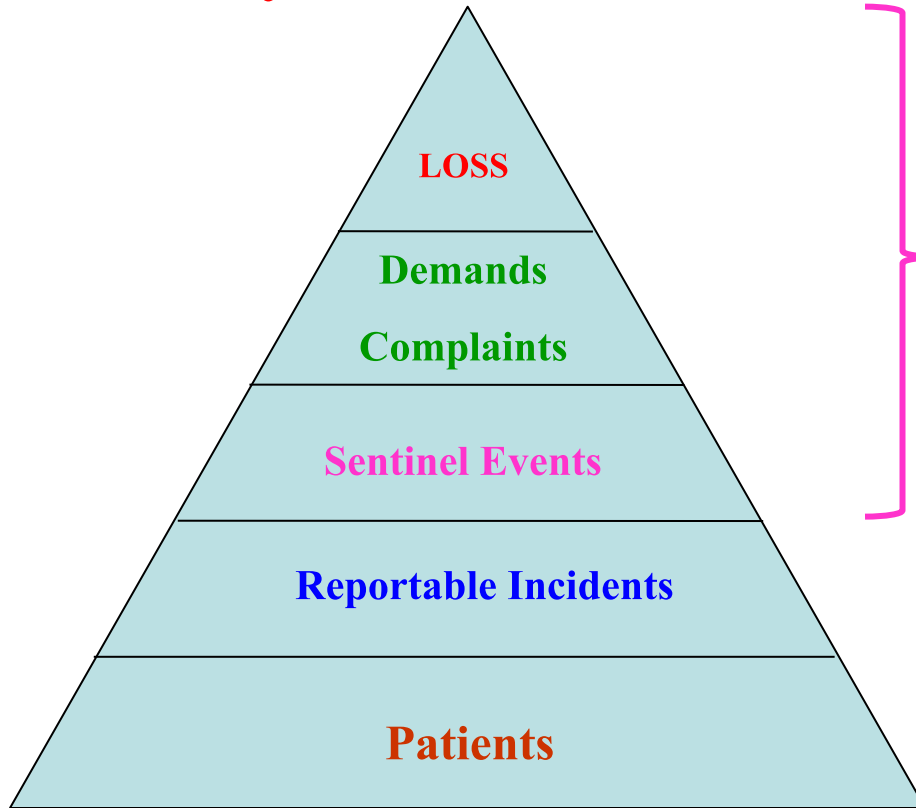


Hazards

Other holes due to
latent conditions



Pyramid of Clinical Incidents



Greatest direct Financial and
Reputational Impact

Goal Healing and mitigation

Greatest Impact on Culture of

Safety and Service

Goal Safety and reliability

Safety is providing care and services in a manner that minimized the risk of avoidable harms

Reliability is doing the right thing at the right time in the right place

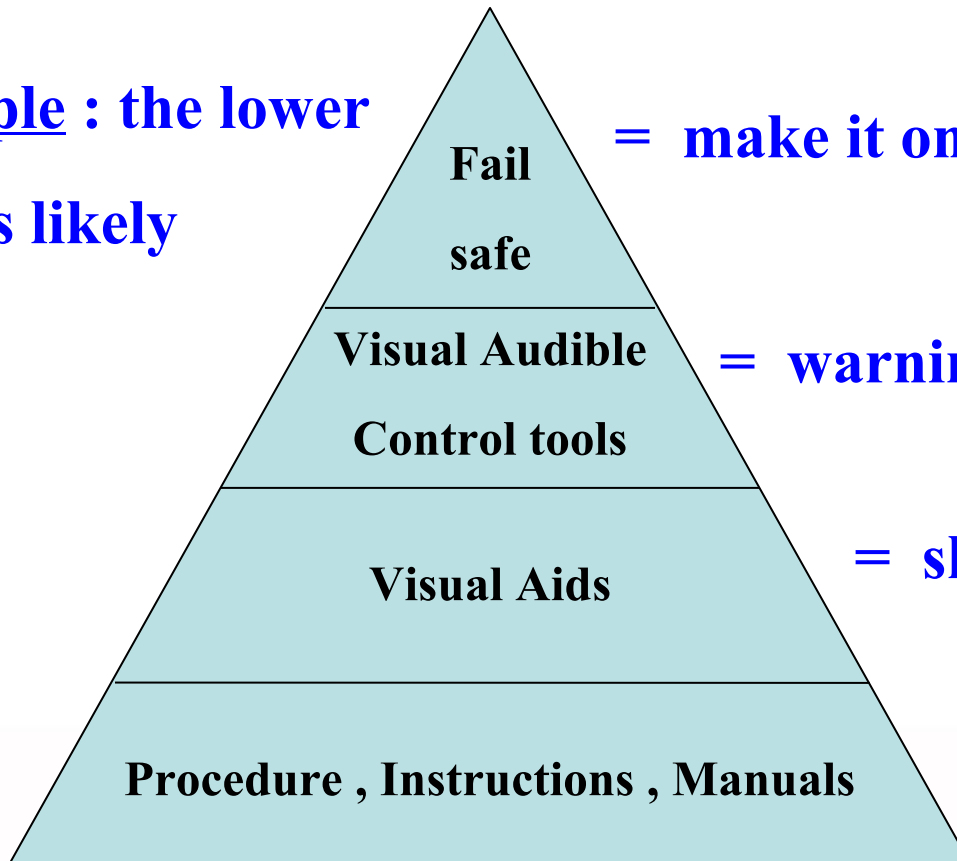


Murphy's Law and Risk Matrix

If an incidence is frequency repeated and there is a small chance each time that something will go wrong, sooner or later it will go wrong. So the combination of error probability and consequence loss will help to determine what compliance measures should be implemented.

Concept of Compliance Pyramid

Principle : the lower
the less likely



= make it only way , no alternative

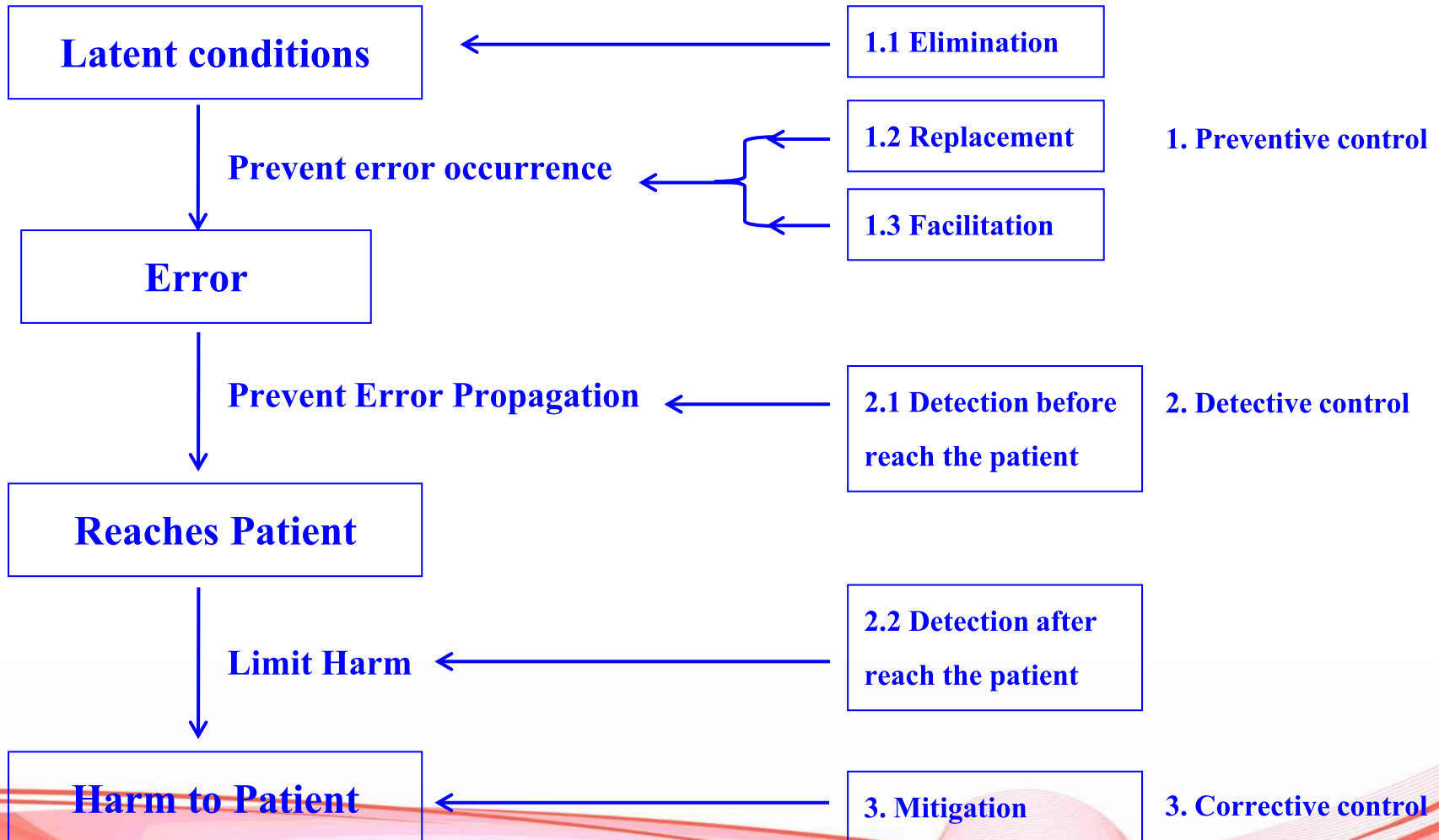
= warning

= showing

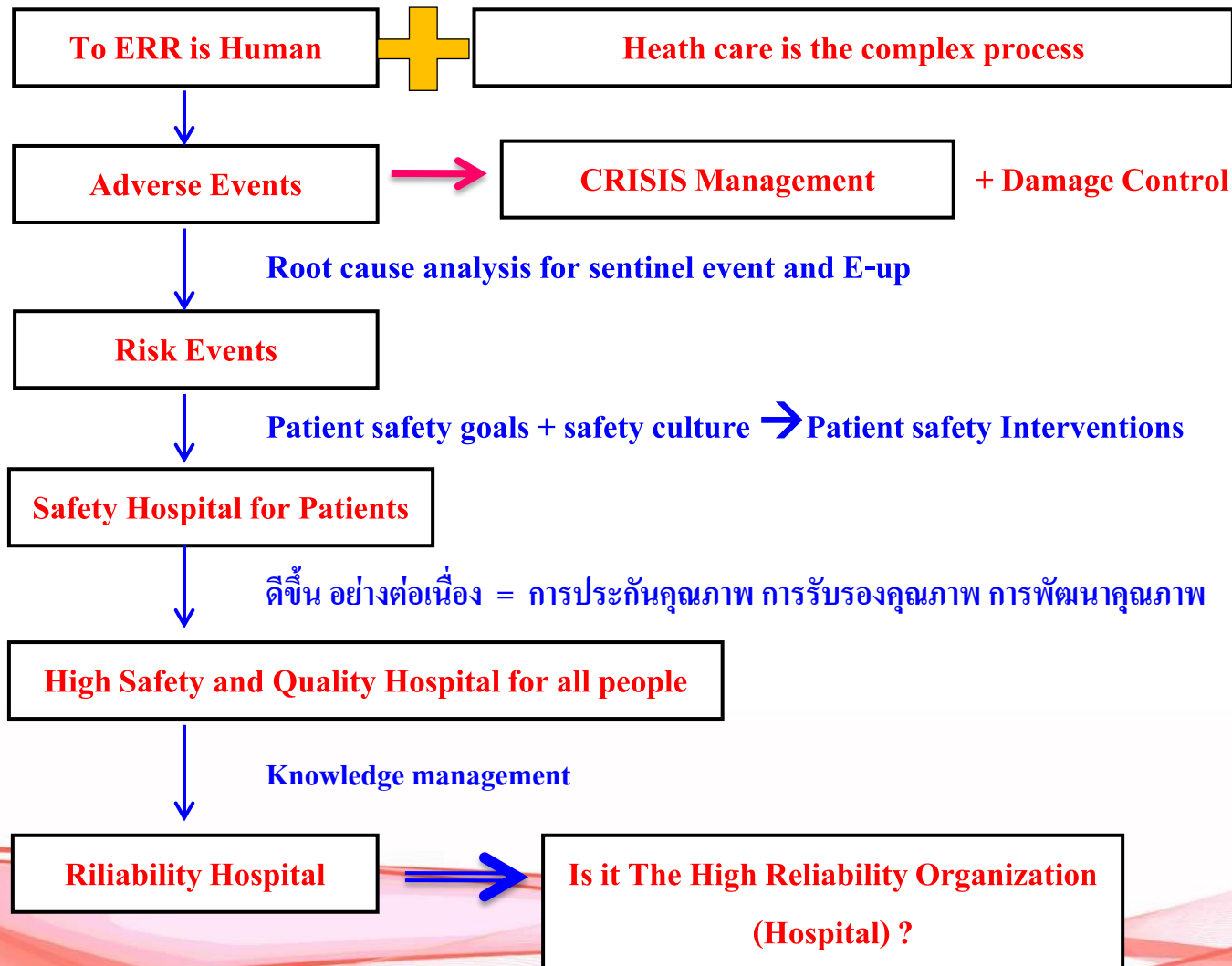
= reading

Patient Safety Interventions

Principles

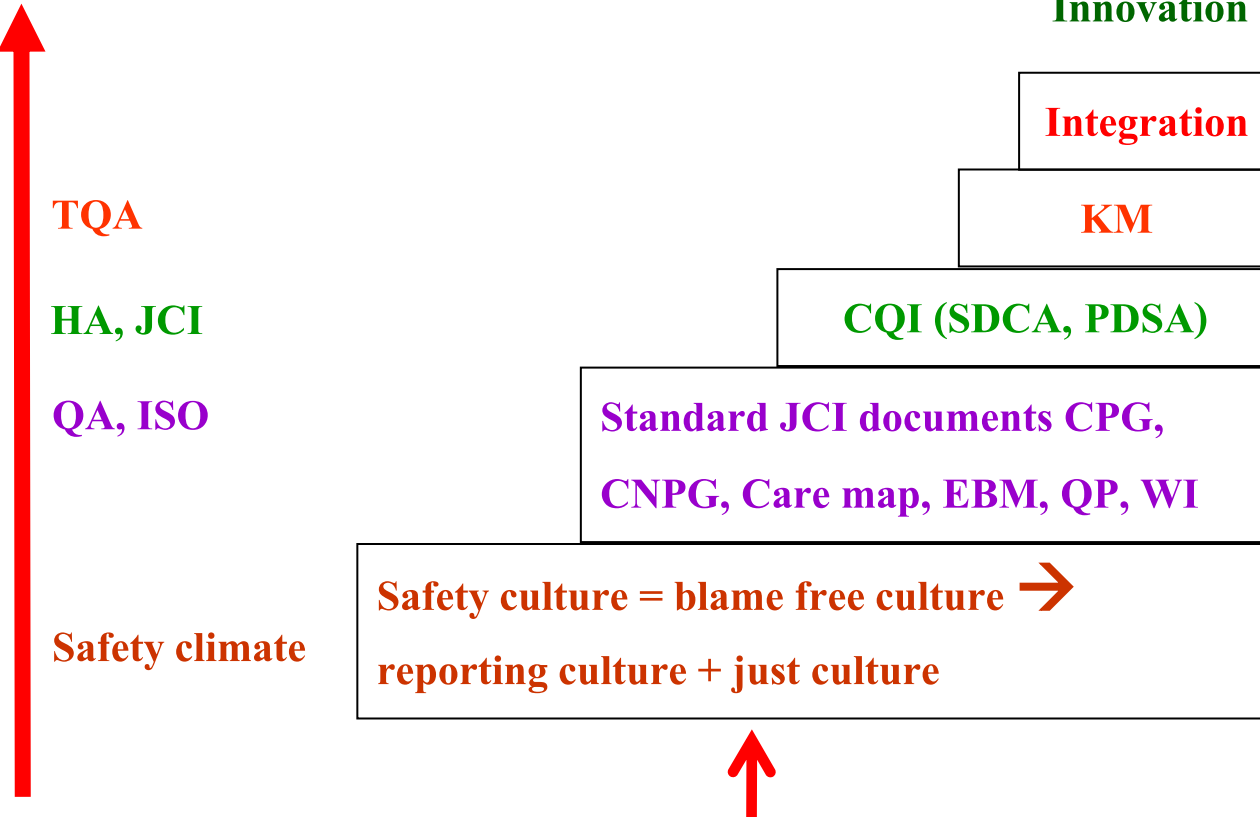


เป้าหมายของการบริหารจัดการความเสี่ยงทางคลินิกคือ การเป็นโรงพยาบาลที่น่าเชื่อถือ ?





Measurement

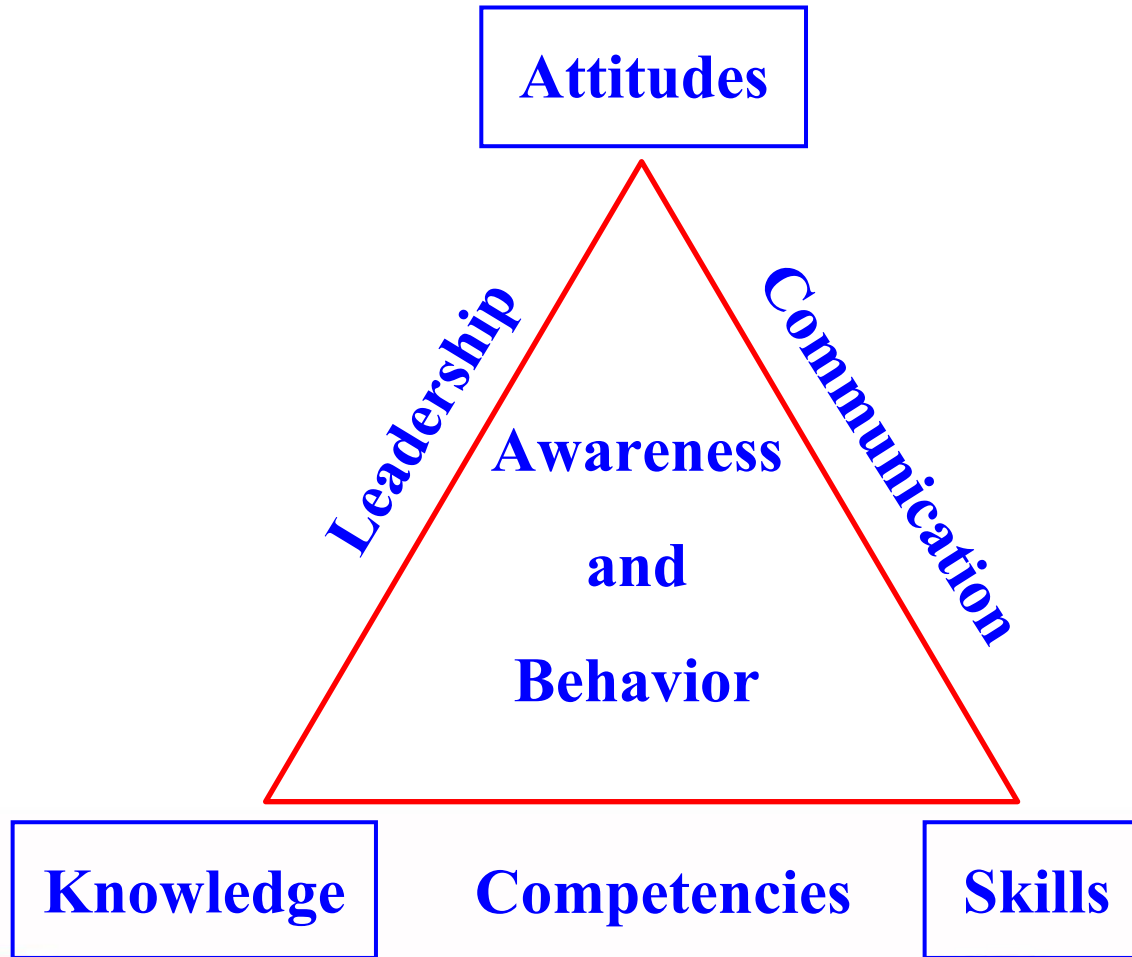


High Reliability



Leadership : Policies, communication, accountability, resource
Resource supporting (สร้าง Safety Environment)

How to develop a culture of safety





Knowledges → Know What ?

1. Healthcare is complex system.
2. “To Err is Human ”
3. The limits of human factors.
4. Safety design principles.
5. Characteristics of high-reliability organization.
6. Patient safety resources.

Skills



Know How ?

1. Effective use of technology and standardized practices.
2. Effective use of strategies to reduce risk or harm.
3. Appropriate strategies to reduce reliance on memory.
4. Communication the hazards and errors to patients families and health care team.
5. Organizational error reporting systems.
6. Analyzing errors and designing system improvement.
7. Engage in root cause analysis rather than blaming.



Attitudes → Know Why ? Know Exception?

- 1. Value the contributions of standardization/reliability to safety.**
- 2. Appreciate the cognitive and physical limits of human performance.**
- 3. Value own role in preventing errors.**
- 4. Value vigilance and monitoring patients , families , and other members of the health care team.**



Know Application

**Making on a culture of safety begins
with learning how to learn about
safety.**



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Voluntary error reporting system

Versus

Mandatory error reporting system



“ Electronic Reporting Process ”

Versus

“ Traditional Reporting Process ”

How to increase error reporting ?

1. Leadership committed to patient safety.
2. Eliminating a punitive culture / blame free culture.
3. Increasing reporting of near misses.
4. Providing timely feedback and follow-up actions and improvements to avert future errors.
5. Having a multidisciplinary approach to reporting.



**The goal of a culture of safety is to “ minimize
the RISK (Risk) of harm to patients and
providers through BOTH system effectiveness
and individual performance ”**

Cronenwett et al.,2007



Threats to patient safety and errors

- **Extremely complex and inherently risk-prone system.**
- **Lack of comprehensive verbal , written, and electronic communication systems.**
- **Tolerance of individualistic practices and lack of standardization.**
- **Fear of retribution inhibiting reporting.**
- **Organizational lack of ownership for patient safety.**



Elements of a culture of safety

- Safety as an organizational priority by shared core values and goals.
- Effective teamwork to accomplish the goal of safe , high-quality patient-care.
- Patient involvement
- Openness/transparency
- Accountability

Lamb et al,2003



Human factors is the science of the relationship between humans , the technology they use , and the environment in which they work

Handoffs or Handover communications

- Transition in care and handoffs/handover for effective communication is face-to-face communication.
- Definition : the real time process of passing patient specific information from one caregiver to another or from one team of caregiver to another for the purpose of ensuring continuity and safety of the patient/client/resident's care (SBAR : situation , background , assessment , and recommendation)



Process for examine safety threats

- Root cause analysis (RCA) after all sentinel events.
- Failure mode effective analysis (FMEA)



Disclosure of errors to patients

**Accountability to patients and families is a
hallmark of a culture of safety.**



Making care safer : Nine categories that provide opportunities to improve patient safety.

1. **User-centered design** to easier for clinician to do the right action.
2. **Avoid reliance on memory** : protocols and checklists , default in an electronic order
3. **Attend to work safety** : work hours , workloads , staffing ratios , distractions , interruptions
4. **Avoid reliance on vigilance** : well-designed alarms , rotating staff and breaks.
5. **Training concepts for teams** : intra-and interprofessional communication and collaboration.



6. Involve patients in their care : knowing the plan of care , holding round in patient rooms , having patients/families participate.
7. Anticipate the unexpected : pilot testing for new processes and technologies.
8. Design for recovery
9. Improve access to accurate , timely information : drug formularies , evidence-based practice protocols , patient records , laboratory reports.



Openness is a critical factor in a culture of safety.

**It indicates there is acceptance of human elements
in error and a means of reporting any error or near
miss or identified potential for error.**



**Within a culture of openness , there is a
“Just culture” where discipline is limited
to reckless or egregious behavior.**



Safety Culture and High-reliability Organization

All employers fully engaged in the process of detecting high-risk situations , there are resources dedicated to bringing about the changes suggested , everyone is empowered to act in dangerous situation , there is a work environment that is fair to employers.



“ Near Misses ” versus “ Adverse Event ”

- 1. Valuable information regarding in systems that predispose to adverse events.**
- 2. Discussion of near-misses usually do not generate the defensive reaction.**



Who is “Second Victim”

Concept There should be the systems that help the professional to understand the event , to stimulate healing , and to improve the health care system.

Ramathibodi Strategic Line of Sight





Clinical Risk Management with Ramathibodi Microsystem

- Philosophy** **To Err is Human → Medical Error → Preventable Adverse Event**
- Aim** **In Microsystem, Safety should be a precondition**
- Steps** **I. Created Safety Environment
II. Built Safety Culture
III. Done Safety Practice
IV. Measured Safety Climate**



I. Created Safety Environment By Leaders

- 1.1 Policies: - Ramathibodi Safety Hospital
with No Zero Event
- Transparent Disclosure**
- 1.2 Allocate Resources to Patient Safety**
- 1.3 Commitment Thought Activities and
Conversations**
- 1.4 Promise Making and Forgiveness**



II. Built Safety Culture

- 2.1 Systemic Thinking Approach (Work, Human and Organization Condition)**
- 2.2 Blame free Culture**
- 2.3 Just Culture**
- 2.4 Reporting Culture**
- 2.5 Transparent Judgement with Accountability**



III. Done Safety Practice

3.1 Assess and Improve Process in Healthcare System

e.s. 5Ps Model, 5s Method, SIMPLE, Surgical Safety Checklist, Hand Washing, Lean, Risk Matrix, Electronic Medical Record, Medical Reconciliation.



3.2 Tracking Near Miss and Medical Errors

3.2.1 Improve Voluntary Report System

3.2.2 Review Medical Errors and AE Data

3.2.3 Information Feedback

3.2.4 Learn from Error



3.3 Immediate Response to Error

For Patients and Families

3.3.1 Disclosure

3.3.2 Apologize

3.3.3 Compensation

For Involved Healthcare Workers

Immediate Treat with
Sympathy, Understanding
and Emotionally Support



IV. Measured Safety Climate

4.1 Surveys of Healthcare Worker Attitude

**4.2 Observe Non-Punitive Culture in
Microsystem Unit**

4.3 Reporting

4.3.1 Potential Safety Event or Near miss

4.3.2 A, B Occurrence Report

4.3.3 Incidence Across Different levels



Patient Safety as freedom from accidental injury

The Institute of Medicine
(IOM , 1999)



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Thank You

