



*I went to the doctor
with fluid on the knee
and he said "You're
not aiming straight"*

Sandi V
www.wackywits.com

Deaths in Custody

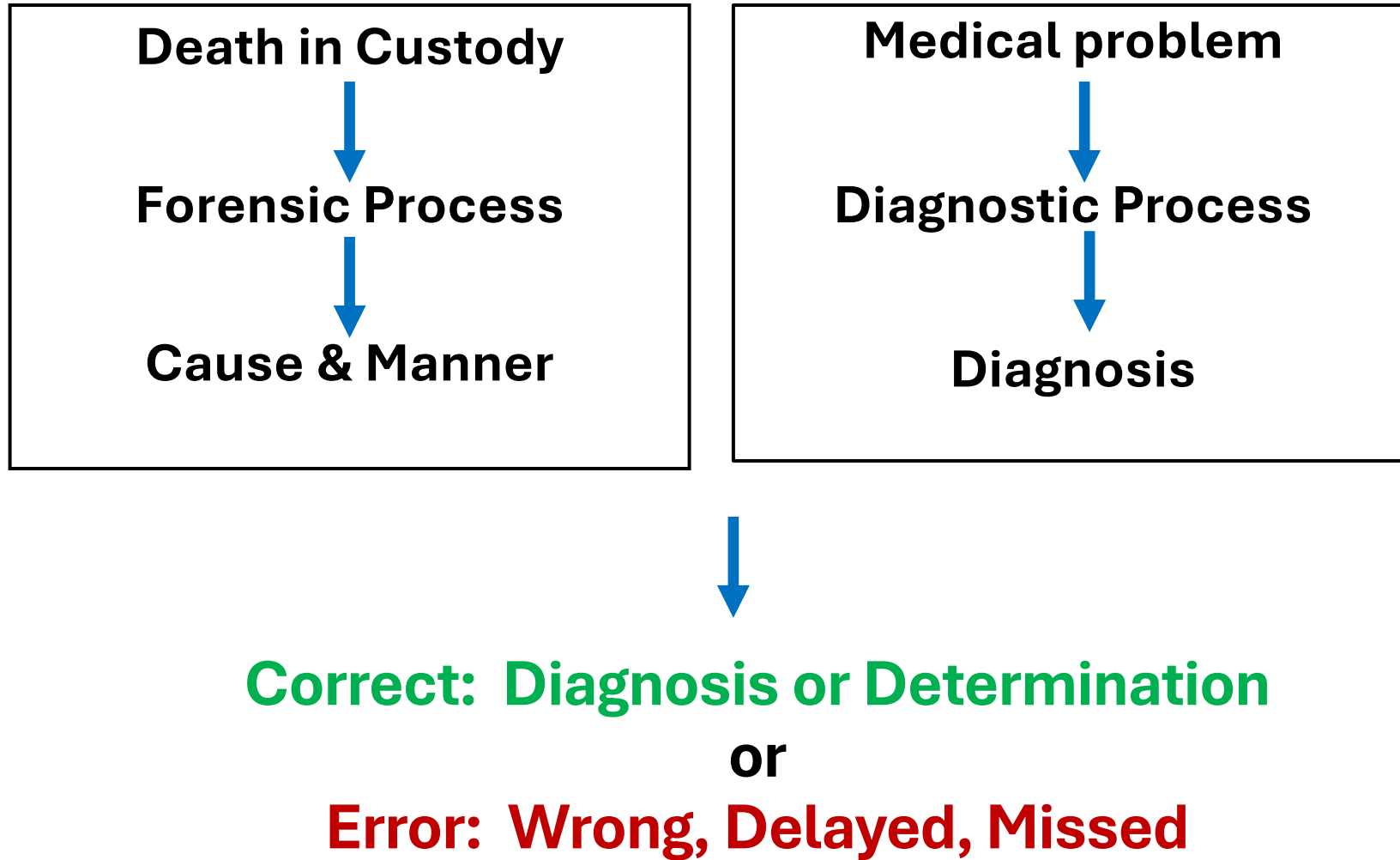
Improving Forensic Determinations

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What problem are we trying to solve?

Too many death investigations are flawed

- There is no investigation
- The investigation is incomplete
- The conclusions of the investigation are incorrect
 - The cause of death is incorrect
 - The manner of death is incorrect



What we know about dx error: **It is COMMON**

1 in 10 diagnoses is **WRONG**

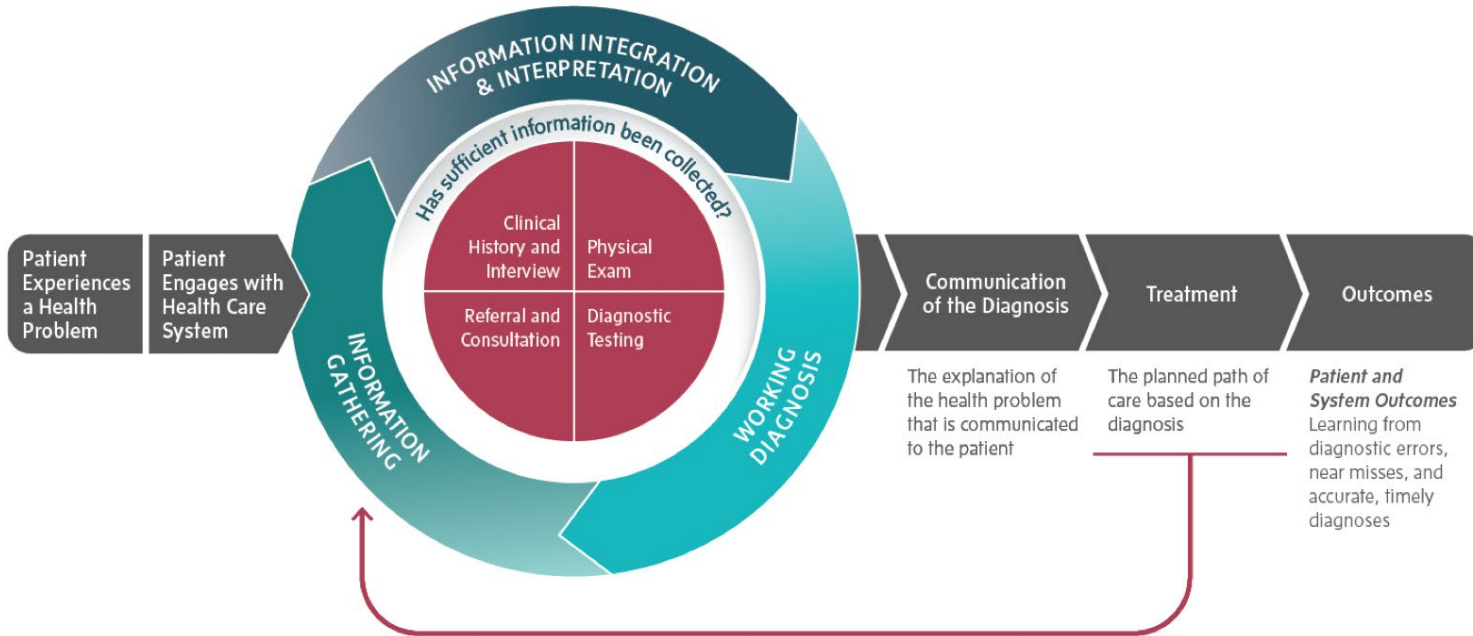
A significant fraction are **HARMFUL** – A top 10 cause of death

ECRI Institute, 2018: **The #1 patient safety concern in healthcare today**

US National Academy of Medicine:

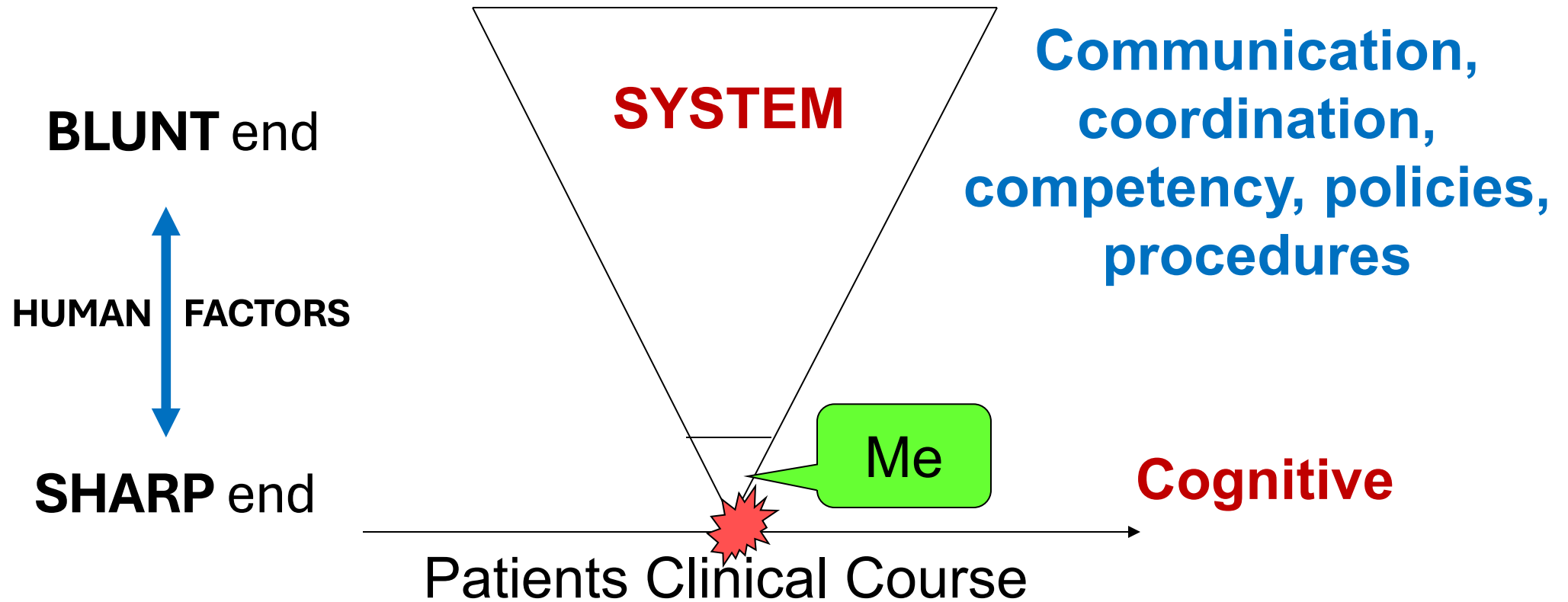
“It is likely that most of us will experience at least one diagnostic error in our lifetime, sometimes with devastating consequences.”

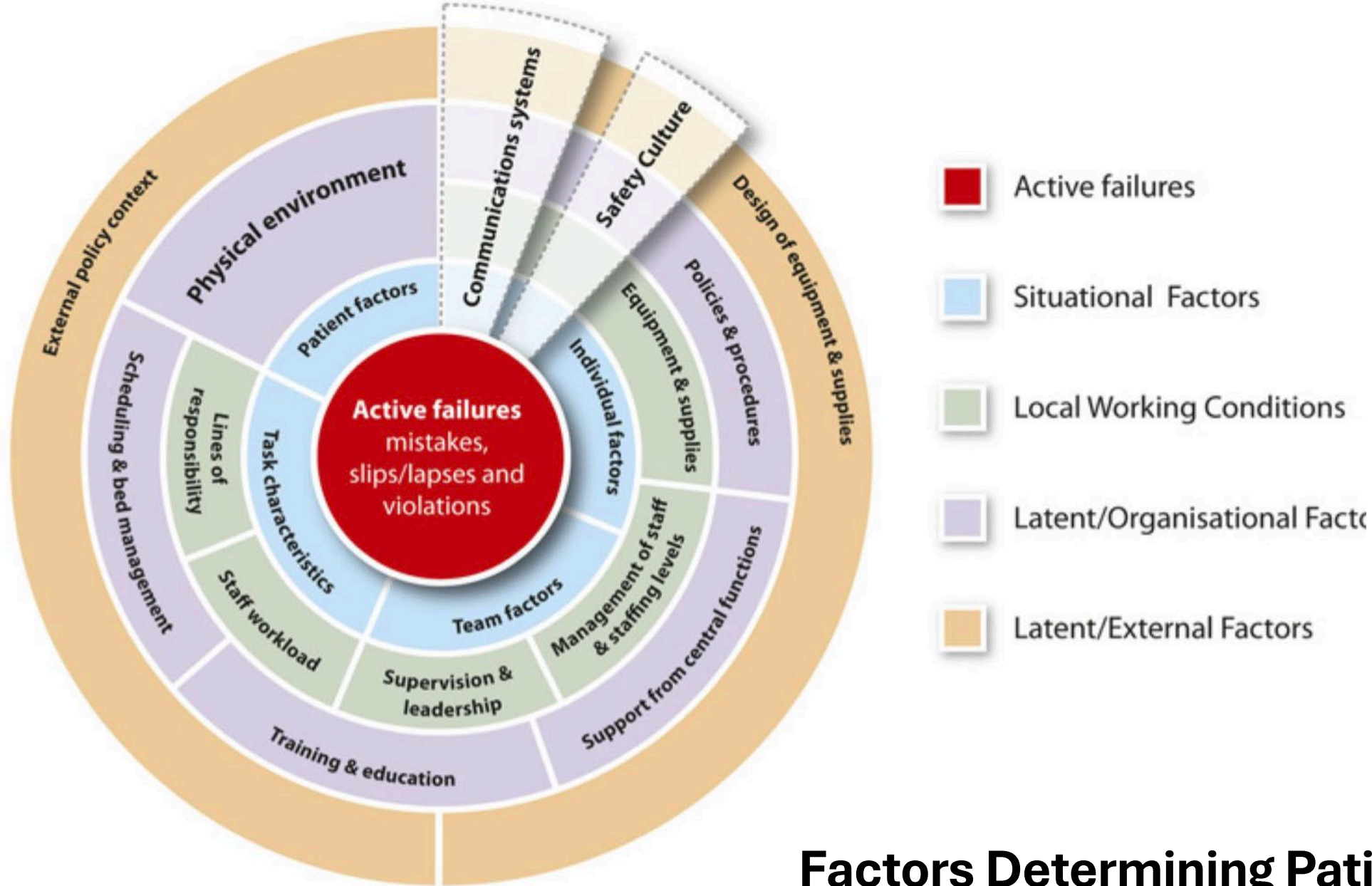
What we know: **WHY** they happen



It involves **MANY** steps and each step is error prone
It is **COMPLEX**

What we know: **WHY** they happen

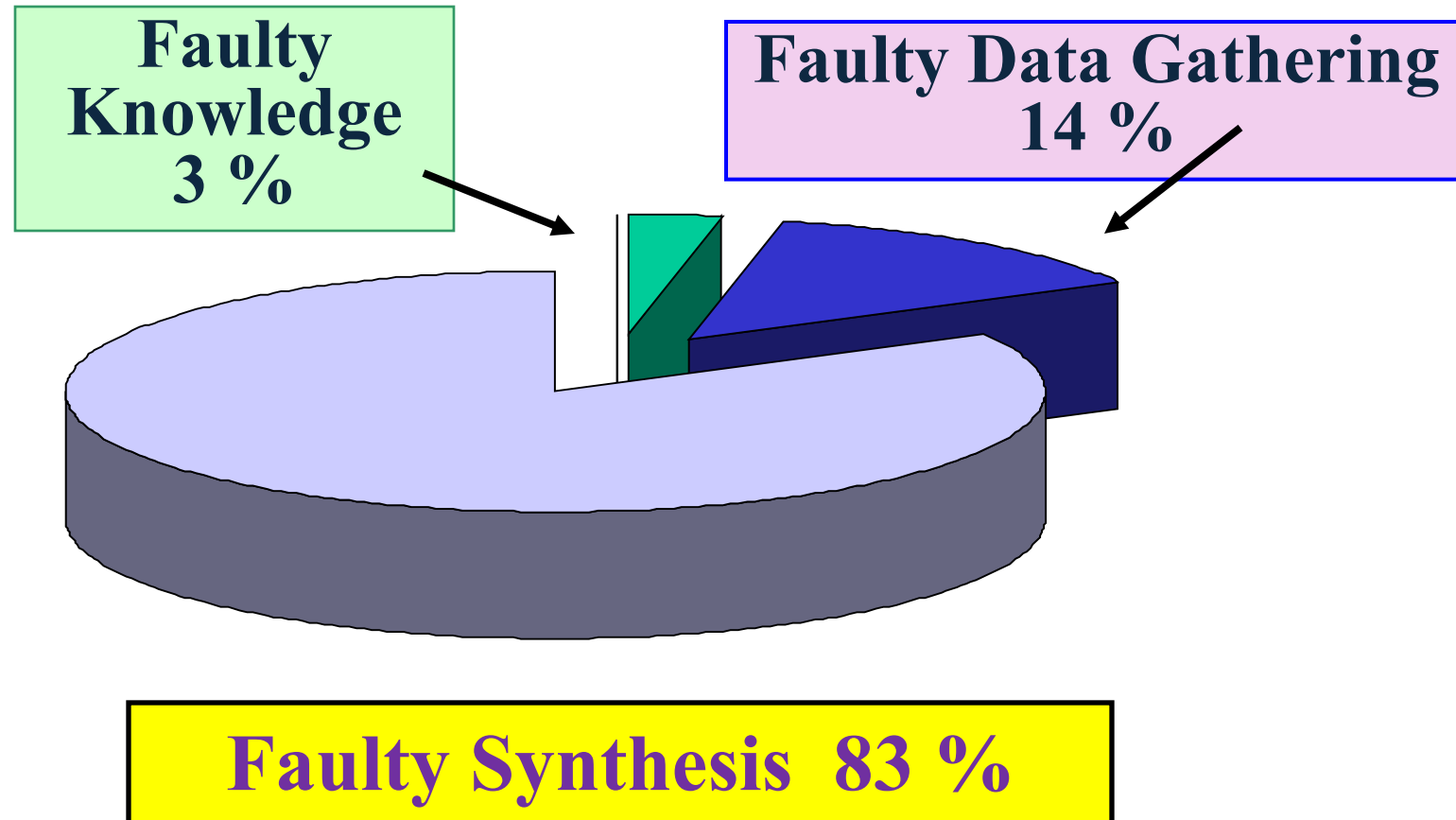


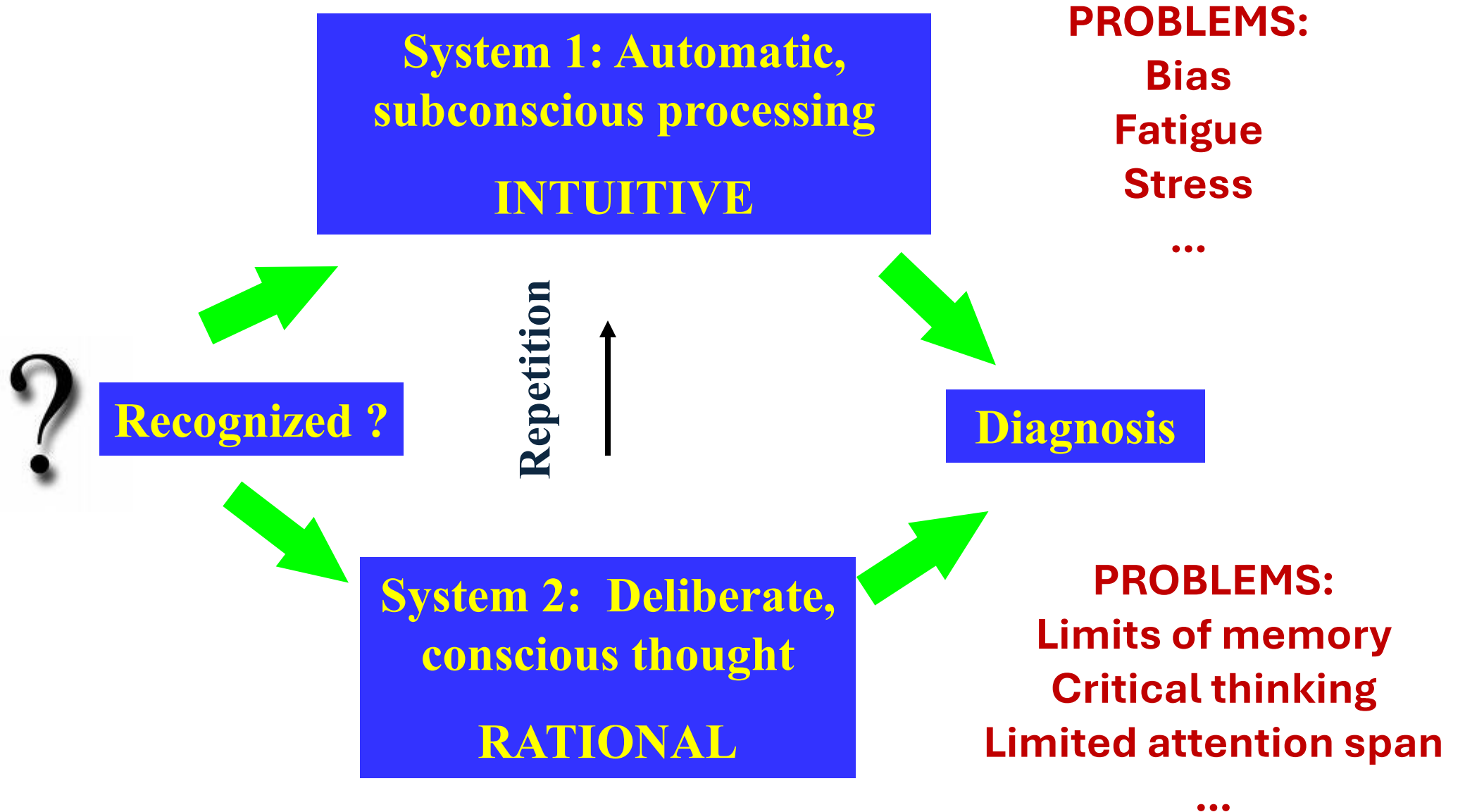


Factors Determining Patient Safety.

Lawton et al. BMJ Quality and Safety, 2012. 21(5): p. 369-380.

Cognitive Errors: 320

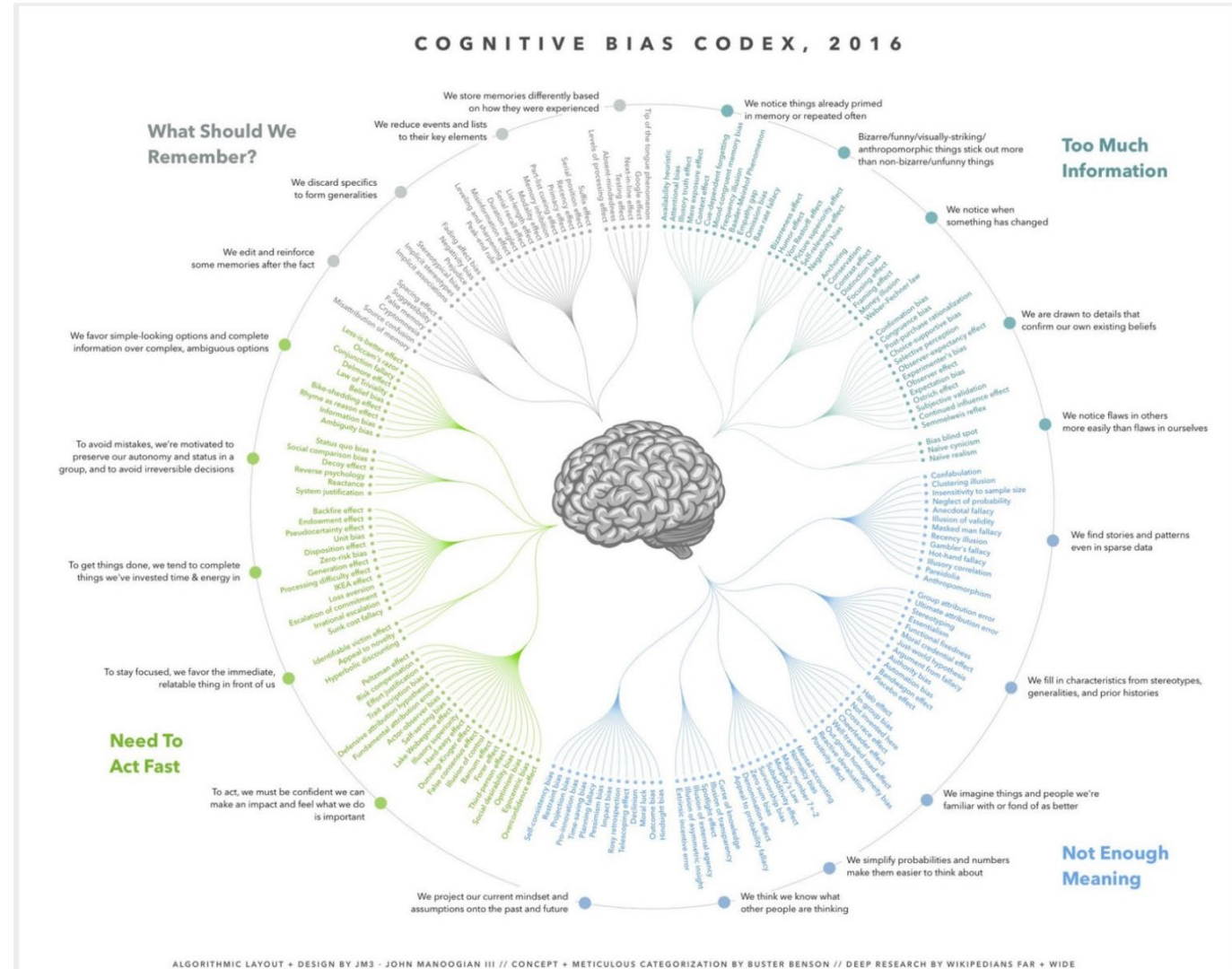




The Cognitive Bias “Codex”

Wikipedia

Cognitive Bias
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Human nature
=
Our human tendencies

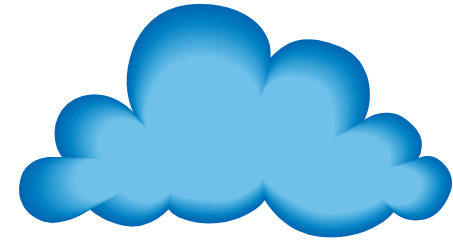
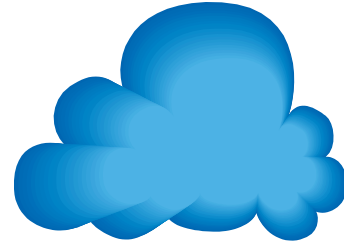
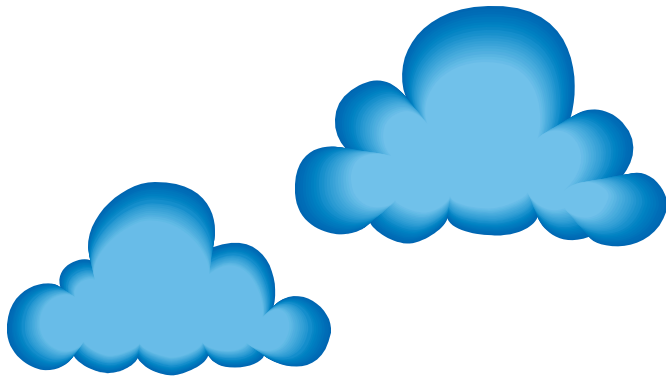


How to improve?



Key Features:

- 1. CULTURE** - Safety is the #1 priority
- 2. REPORTING** - No penalties
- 3. LEARNING** from errors



United Airlines



Dulles →

1974 – The new approach to Dulles ...

2, 1974

DECEMBER 2, 1974

20 CENTS

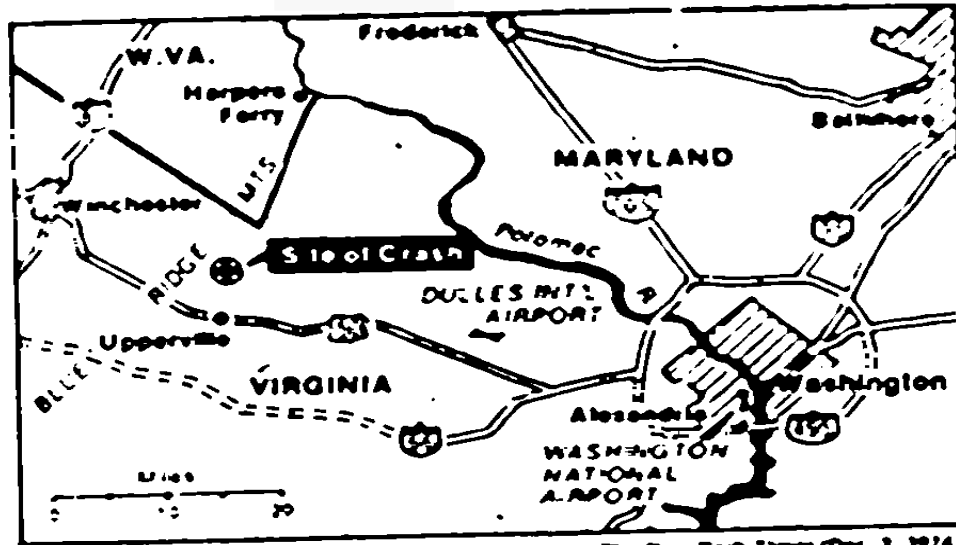
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ALL 92 ON BOARD KILLED WHEN JETLINER CRASHES IN RAIN NEAR WASHINGTON



The New York Times/Dec. 2, 1974

T.W.A. 727 BURNS

Aircraft, Heading for
Dulles, Hits Hill Near
Secret Installation

By The Associated Press

UPPERVILLE, Va., Dec. 1—
A Trans World Airlines 727,
battling a driving rainstorm,
slammed into a wooded slope
near a secret government in-
stallation today, killing all 92

Holiday Traffic Is Slowed

Aviation Safety Reporting System (ASRS)



Administered by NASA

- Non-punitive reporting
- Reports read and analyzed by experts
- Alerts to FAA, airlines, manufacturers & CALLBACK for pilots

TWA Flight 800

1996

230 deaths



- 4 year investigation costing \$300,000,000
- Salvage operations recovered over 95% of the aircraft

Final conclusion: Vapors in the empty central fuel tank ignited by a short circuit spark

Actions: Complete redesign of the fuel tank circuitry and ventilation

CALLBACK

From NASA's Aviation Safety Reporting System



Issue 533

June 2024

ASRS Alerts Issued in April 2024

Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	4
Airport Facility or Procedure	8
ATC Equipment or Procedure	14
Other	1
TOTAL	27

533

*A Monthly Safety
Newsletter from*

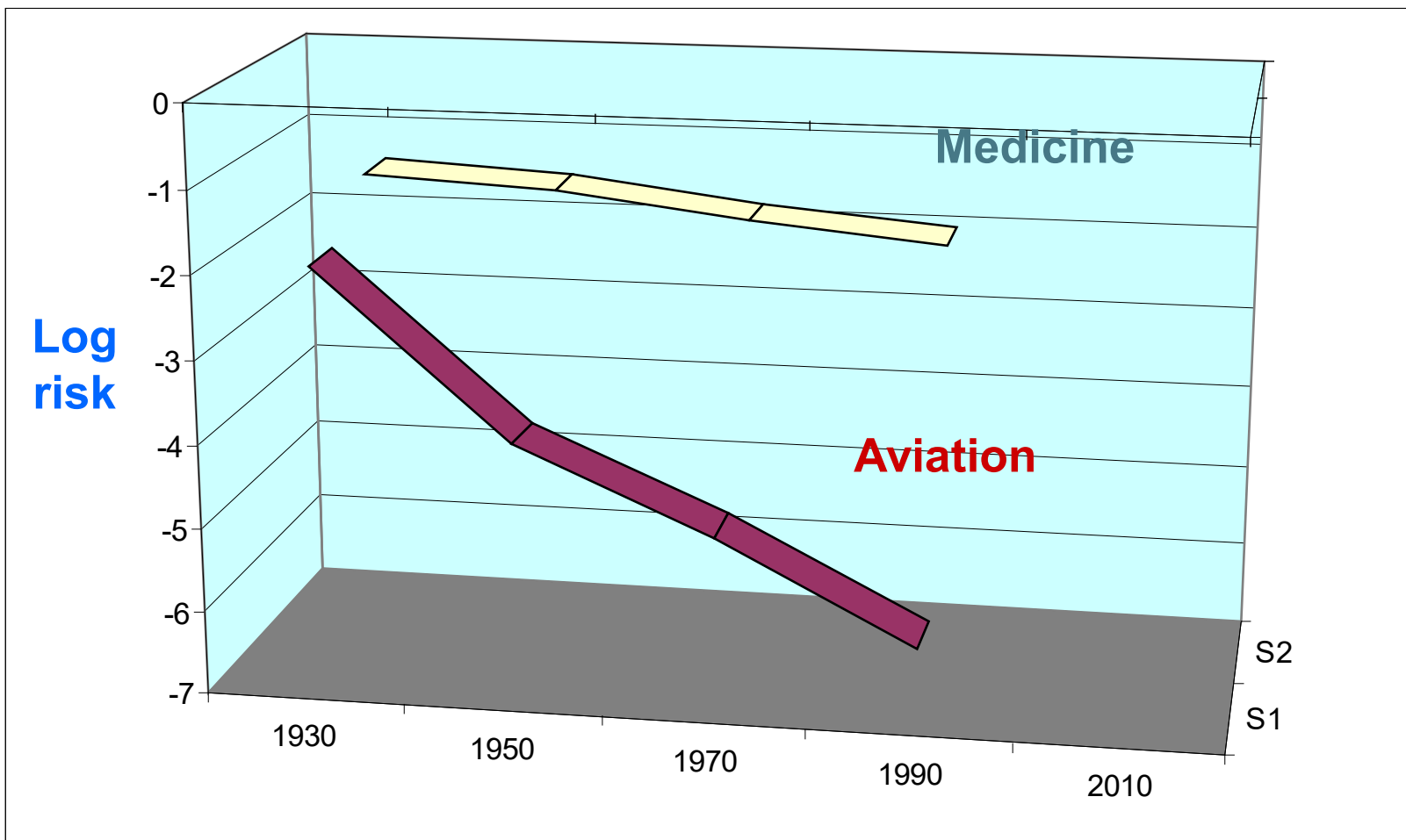
**The NASA
Aviation Safety
Reporting System**

**P.O. Box 189
Moffett Field, CA
94035-0189**

<https://asrs.arc.nasa.gov>

April 2024 Report Intake

Air Carrier/Air Taxi Pilots	6,770
Flight Attendants	1,802
General Aviation Pilots	1,595
Military/Other	904
Mechanics	354
Controllers	313
Dispatchers	305
TOTAL	12,043



Risk of Death (per flight, or per admission)

Deaths in Custody

Diagnostic Error

1. These are both complicated, multi-step processes
2. They are error-prone
3. They can be understood by examining the system issues, the cognitive issues, and the human factors issues that tie these together
4. The outcomes can be improved by promoting a culture of safety and continuous learning