
THE HURRIED HISTORY OF RHC: FROM THOUGHT TO DEED IN < 10 YEARS



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Primum non nocere

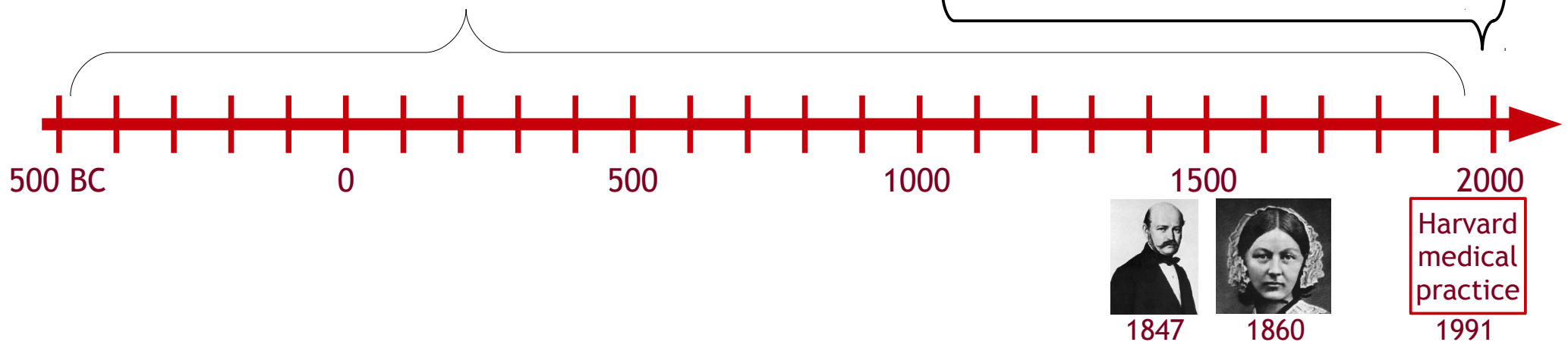


The sporadic period (~500 B.C. - 1950)

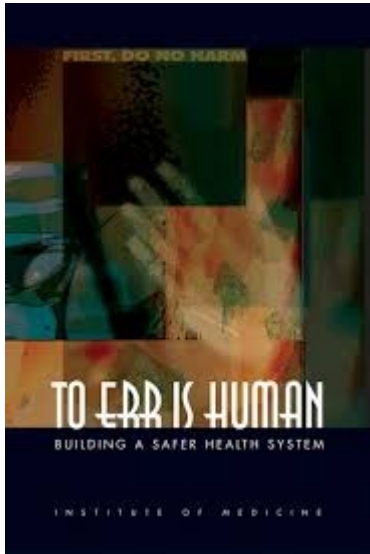
Isolated pieces of evidence but no coherent body of thought or articulated theories.

The Cult period (~1950 - ~1990)

Appearance of small groups of vocal and passionate believers.



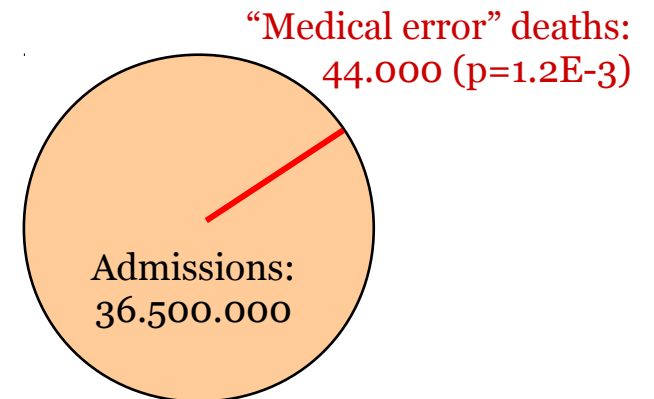
The plot thickens



44.000 - 98.000 patients / year die due to medical error (Institute of Medicine, 1999)

Misleading, since people who are admitted often are ill and would have died anyway

Misleading because too few cases are reported (1:10). Real number is 220.000 - 490.000 patients/year.



Harm or death due to human error in 10% of admissions, (>850,000 per year)
UK Department of Health (2000)

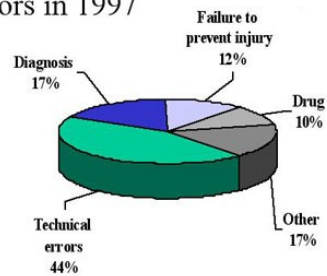
The complexity of secondary care

The Breakout period (~1990 - ????)

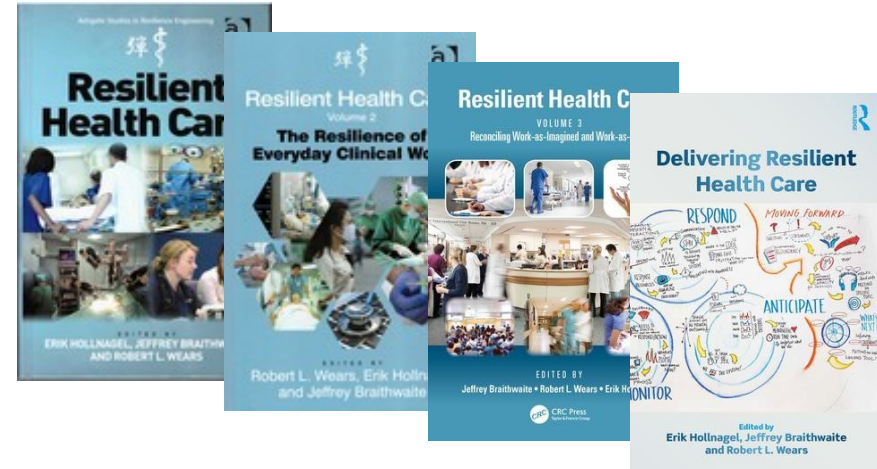
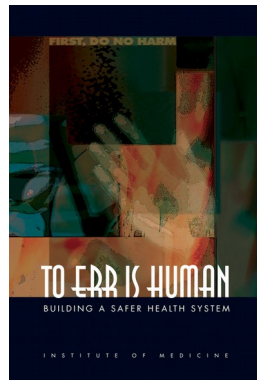
Patient safety becomes a legitimate area of activity in healthcare at large and in the broader society.

Medscape® www.medscape.com

Types of Deadly Medical Errors in 1997



Data from: *To Err is Human: Building a Safer Health System*. IOM, 2000.



The Resilience period (2011 - ????)

Distinction between Safety-I and Safety-II. Acceptance of systemic perspective (CAS).

1990 1995 2000 2010 2020

Thinking about safety

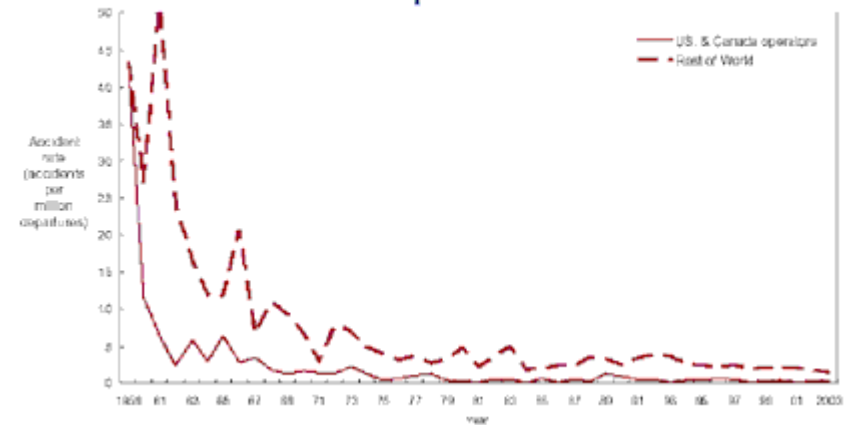


When we think about safety, we usually think about accidents - about (low probability) events with adverse outcomes.

A system is safe if as little as possible goes wrong.



Statistical Summary of Commercial Jet Airplane Accidents Worldwide Operations 1959-2001



Airplane Safety. Boeing Commercial Airplane

Managing Safety-I

Safety-I is a condition where the number of adverse outcomes (accidents / incidents / near misses) is as low as possible.

The belief in causality (Causality Credo)



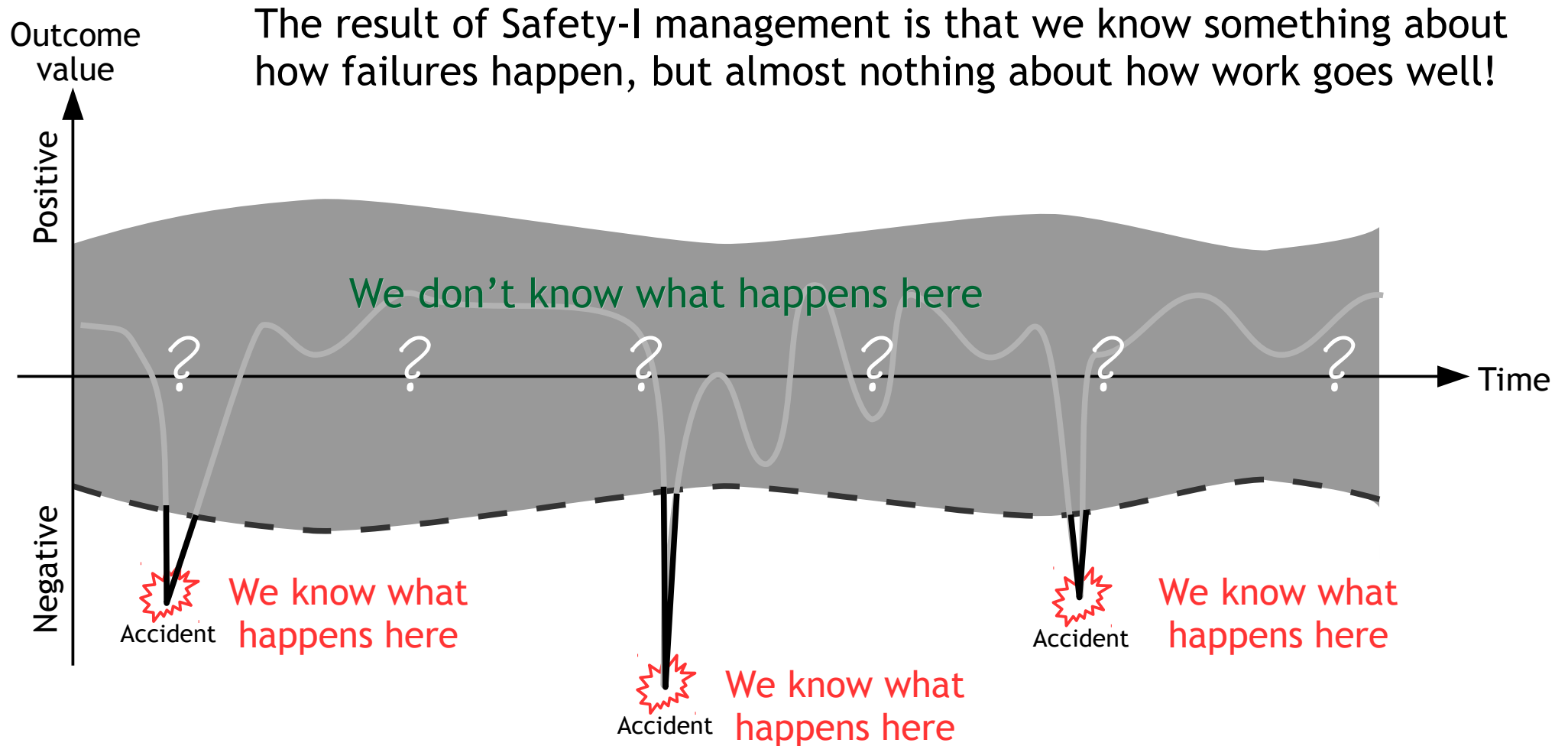
- (1) Adverse outcomes happen because something has gone wrong (cause-effect thinking + value congruence between cause and effect).
- (2) Causes can be found and treated (rational deduction).
- (3) All accidents are therefore preventable (zero harm principle).

PRIMUM NON NOCERE



Prevent, eliminate, constrain.
Safety, quality, etc. are different
and require different measures
and methods.

Do we really know why things go well?

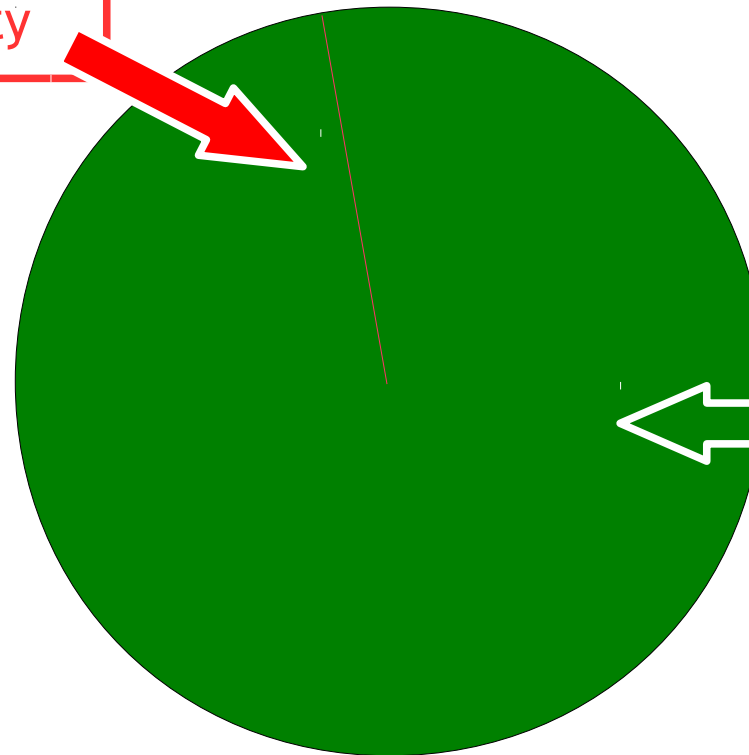


What should we be looking for?

10^{-4} := 1 failure in 10.000 events

Adverse outcomes =
Absence of safety

Easy to see
Complicated aetiology
Difficult to change
Difficult to manage



‘Difficult’ to see
Uncomplicated aetiology
Easy to change
Easy to manage

Intended outcomes =
Presence of safety

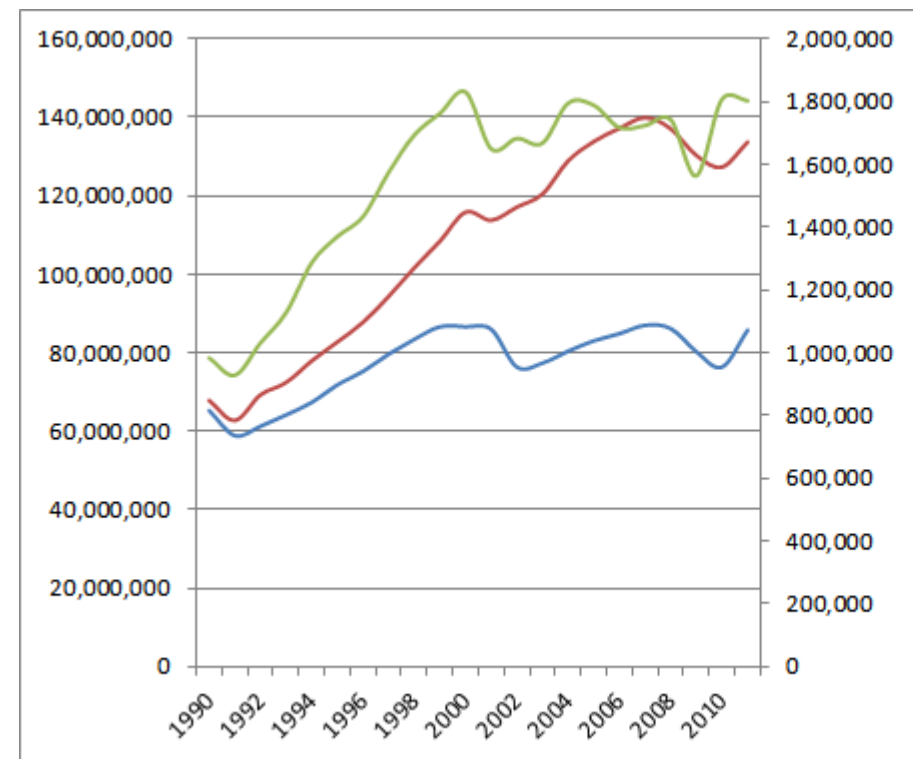
$1 - 10^{-4}$:= 9.999 “successes”
in 10.000 events

Thinking about safety



A system is safe if as much as possible goes right.

We should think about safety in terms of how many things go well and how frequently we succeed.



Performance adjustments are necessary

Systems are so complex that work situations always are *underspecified* – hence partly *unpredictable*

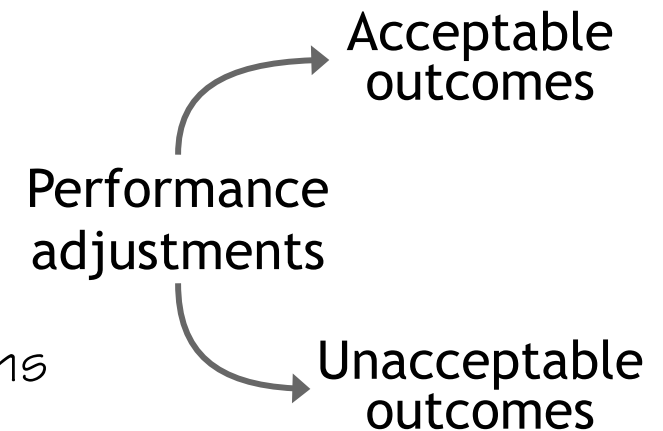
Few – if any – tasks can successfully be carried out unless procedures and tools are adapted to the situation. *Performance adjustments are both normal and necessary.*

Most socio-technical systems are *intractable*. The conditions of work therefore never completely match what has been specified or prescribed.



Individuals, groups, and organisations always *adjust* their performance to meet existing conditions (resources, demands, conflicts, interruptions).

Because resources (time, manpower, information, etc.) always are finite, such adjustments will invariably be *approximate* rather than exact.



Managing Safety-II

Safety-II is a condition where as much as possible goes well.



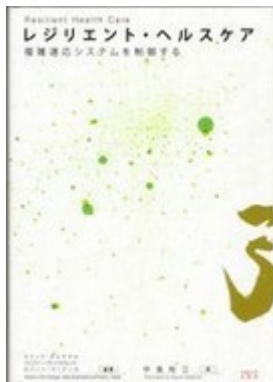
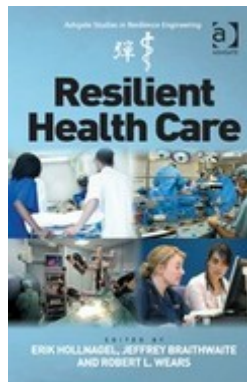
Support, augment, facilitate.
Safety, quality, etc. are inseparable and need matching measures and methods.

1. Care about what happens all the time rather than what happens rarely. **We always count the number of times something fails, but rarely the number of times it just works.**
2. Look for 'work-as-done' - the habitual adjustments and why they are made. **When something is done, as a part of work, it has usually been done before and gone well before.**
3. Learning should be based on the frequency of events rather than their severity. **Small improvements of everyday performance may be more important than large improvements of rare performance.**

PRIMUM BENE FACERE

Development of Resilient Health Care

Resilience Engineering
(Söderköping, October, 2004)



RHCN-1 (2012)

RHCN-2 (2013)

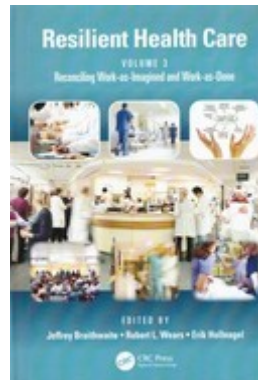
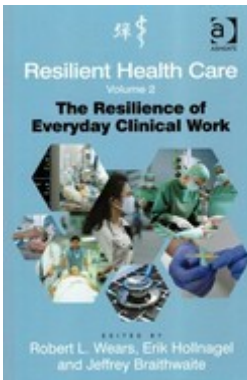
RHCN-3 (2014)

RHCN-4 (2015)

RHCN-5 (2016)

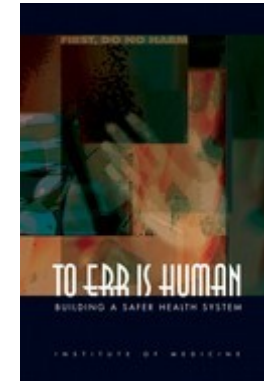
RHCN-6 (2017)

RHCN-7 (2018)



White Paper
Safety-I to
Safety-II
(2015)

English
Swedish
Danish
Portuguese



IOM (1999)

Free from Harm

Accelerating Patient Safety Improvement
Fifteen Years after *To Err Is Human*

NPSF (2015)



RESILIENT HEALTH CARE

“Health is more than the absence of disease”
“Safety is more than the absence of risk”

The 8th RHCN Meeting will be held from August 26th (Mon) to 28th (Wed) 2019 at in Awaji Island, Hyogo, Japan.

The meeting will be preceded on August 25 by a small group workshop or a larger symposium like the one in Sydney in 2015.

