Why don't people bump into each other?

Safe tysyn thesis

When we move in a crowd, we continuously adjust to what other people do.

Just as others continuously adjust to what we do – or will do.

Everyday clinical work must be flexible

Resources (time, manpower, materials, information, etc.) may be limited and uncertain.

People adjust what they do to match the situation.

Performance variability is inevitable, ubiquitous, and necessary.

Because of resource limitations, performance adjustments will always be approximate.

Performance variability is the reason why everyday work is safe and effective.

Performance variability is the reason why things sometimes go wrong.

"Work-as-imagined" and "work-as-done"

Safe tysyn thesis

Design (tools, roles, environment)

Work-As-Imagined

Work & production planning ("lean" - optimisation)

Work-As-Imagined

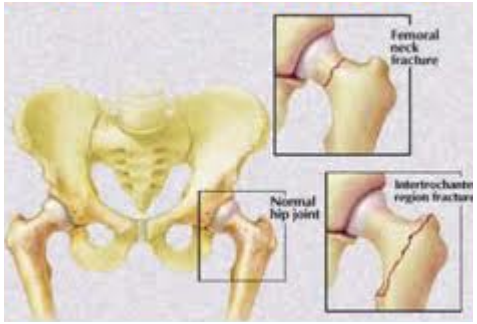
Safety management, investigations & auditing

Work-As-Imagined

Work as imagined – follow the rules!

Box 1: Professional bodies and national agencies who publish guidelines for anaesthetists

- Association of Anaesthetists of Great Britain and Ireland
- Academy of Medical Royal Colleges
- Association of Cardiac Anaesthetists
- Association of Paediatric Anaesthetists
- British Association of Day Surgery
- *British National Formulary*
- British Pain Society
- Department of Health
- Difficult Airway Society
- European Society of Anaesthesiology
- Faculty of Pain Medicine
- General Medical Council
- Health and Safety Executive
- Intensive Care Society
- Medicines and Healthcare Products Regulation Authority
- National Patient Safety Agency
- National Institute for Health and Clinical Excellence
- Obstetric Anaesthetists Association
- Resuscitation Council (UK)
- Royal College of Anaesthetists
- Scottish Intercollegiate Guidelines Network

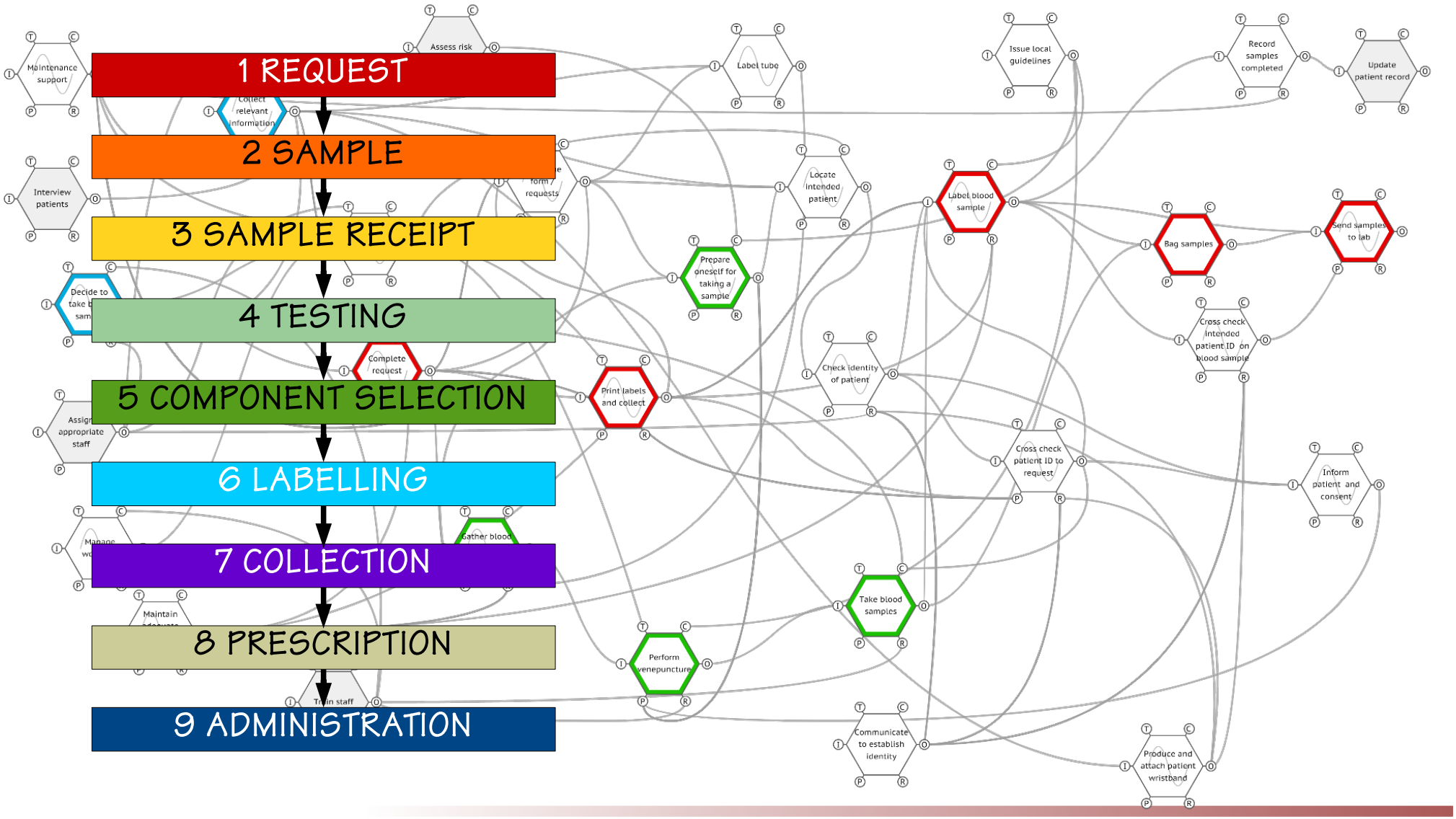


Emergency surgery on a fractured neck of femur involves app. 75 clinical guidelines and policies.

UK Government guideline on "Working Together to Safeguard Children" is 390 pages long!

Carthey et al (2011). Breaking the rules: understanding non-compliance with policies and guidelines. BMJ

Blood transfusion: WAI ≠ WAD



Different ideas about why work is safe

Safe tysyn thesis

Patients are safe because …

Patients are safe because …

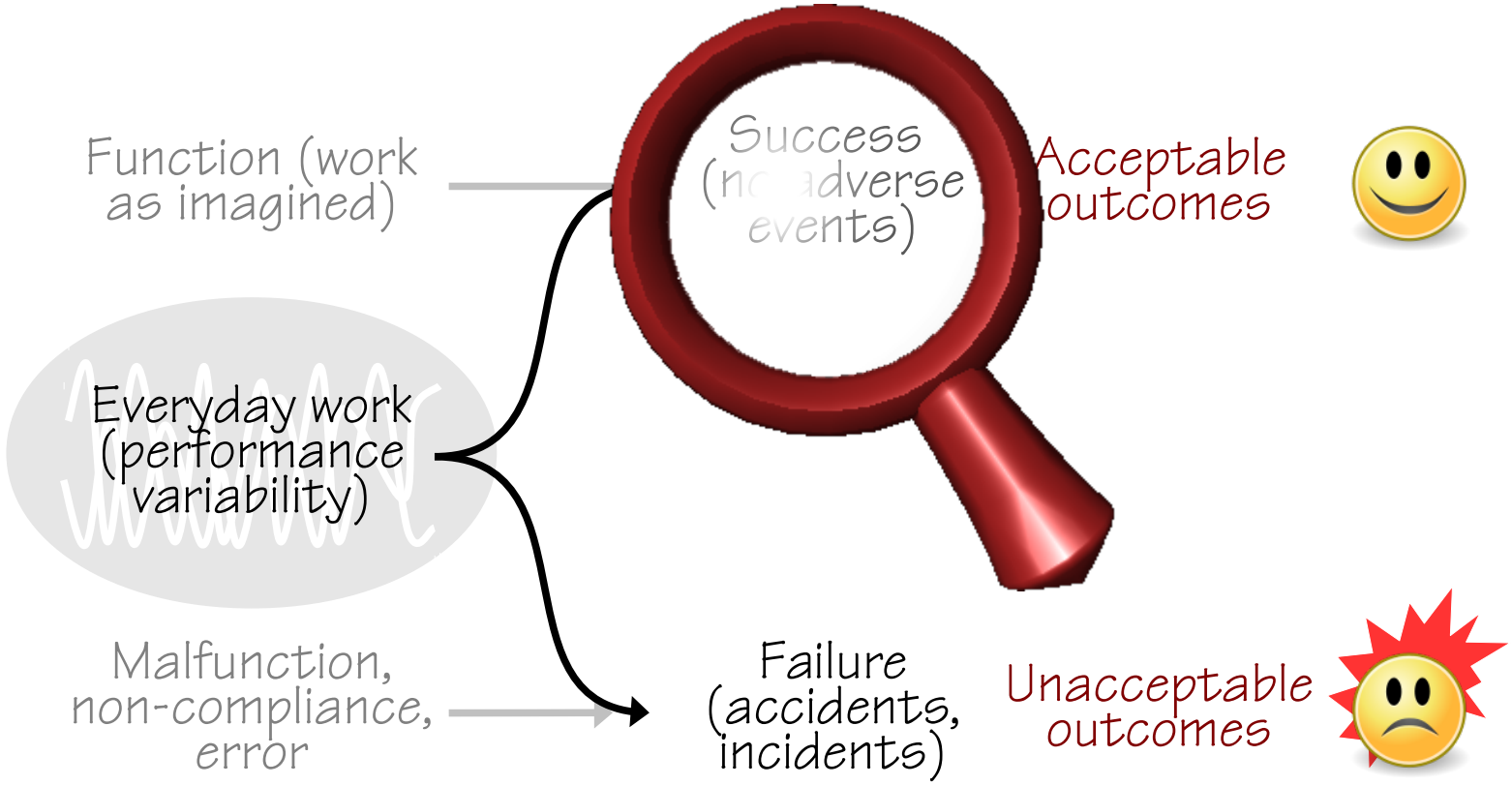
Patients are safe because …

Why are there different ideas about why patients are safe?

And how can they be reconciled?

Increase safety by doing things right

Safety must be begin by understanding the variability of everyday performance.



Constraining performance variability to remove failures will also remove successful everyday work.

Safety II – when everything goes right

Safety-II: Safety is a condition where the number of successful outcomes (meaning everyday work) is as high as possible. It is the ability to succeed under varying conditions.

Safety-II is achieved by trying to make sure that things go right, rather than by preventing them from going wrong.

Safety is defined by its presence.

→

The focus is on everyday situations where things go right – as they should.

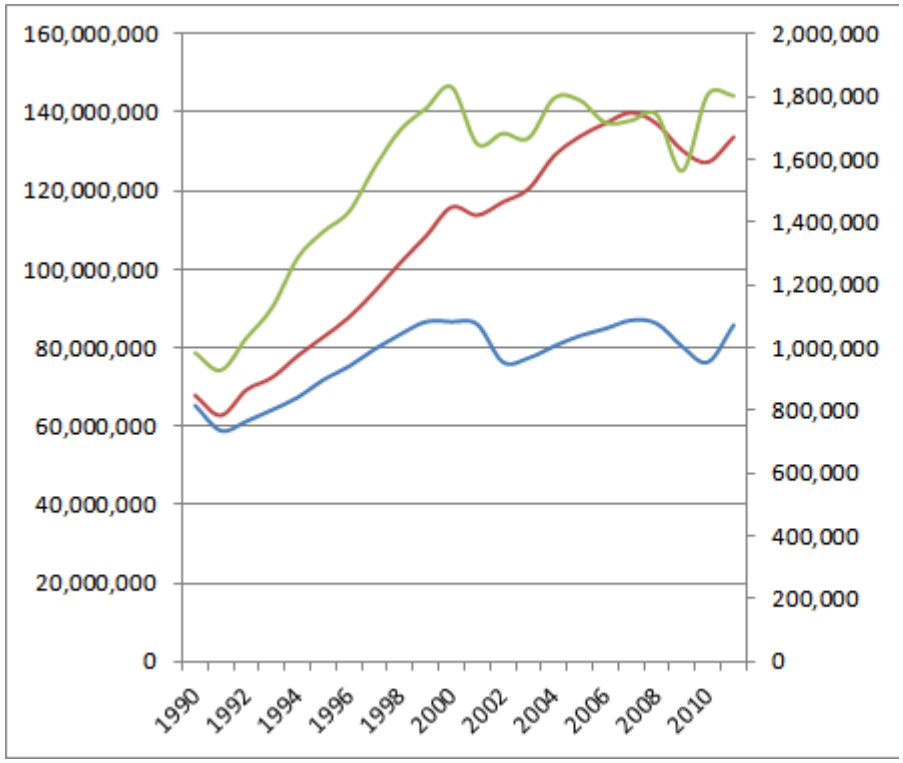
Risk-based: Think about how something can go wrong and then try to prevent that.

Opportunity-based: Think about how how something can go well and then try to support that.

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.



The third interpretation of safety

Safetysynthesis

Safety is the prevention of harm to patients

$$\text{Safety} = \sum_{1}^{n} \text{Accident}_i$$

There is an presence of failures (things that go wrong) due to risks and hazards.
The number of harmful events can be counted.

"Safety is a dynamic non-event"

$$\text{Safety} = \sum_{1}^{n} \neg\text{Accident}_i$$

There is an absence of failures (things that go wrong), but as a result of active engagement.
If safety is a non-event, it can neither be observed, nor measured

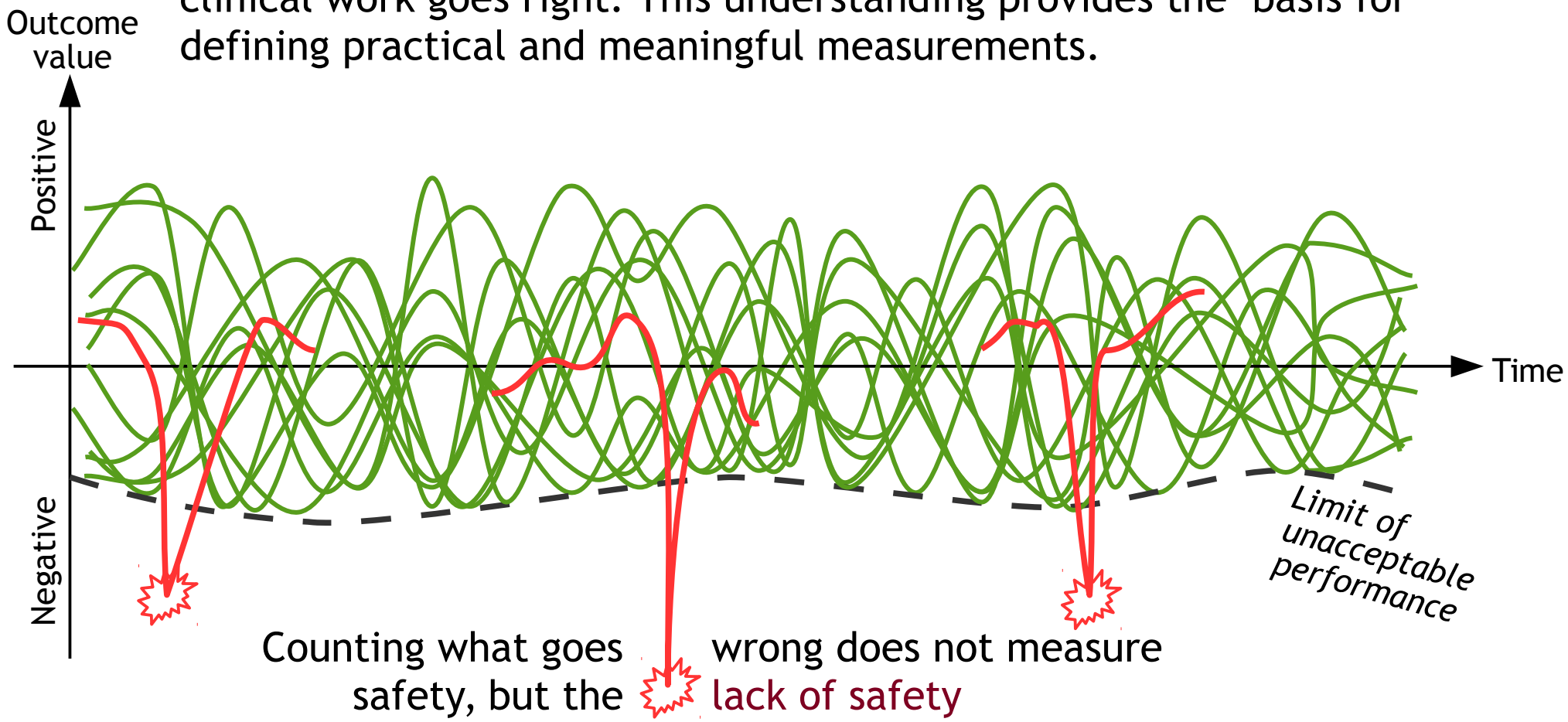
Safety is a dynamic event

$$\text{Safety} = \sum_{1}^{n} (\text{acceptable outcome})_i$$

Safety is the presence of acceptable outcomes.
The more there are, the safer the system is.

The proper measurement of safety

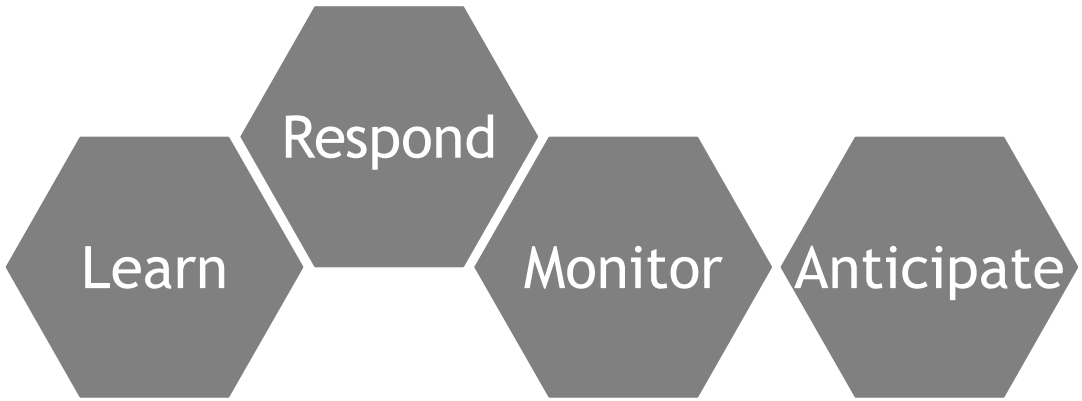
To measure safety properly, we must understand how and why everyday clinical work goes right. This understanding provides the basis for defining practical and meaningful measurements.



Resilience versus resilient performance

Resilience is an expression of how people, alone or together, cope with everyday situations - large and small – by adjusting their performance to the conditions.

Resilient performance means that an organisation can function as required under expected and unexpected conditions alike (changes / disturbances / opportunities).

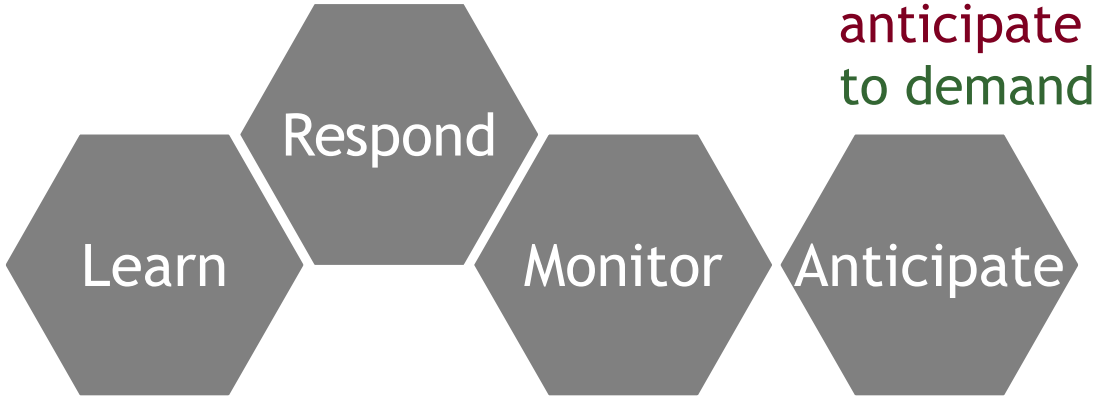


Resilient performance requires that an organisation has the potentials to **respond**, **monitor**, **learn**, and **anticipate**.

Four resilience potentials

Improve the potential to respond to threats and opportunities alike

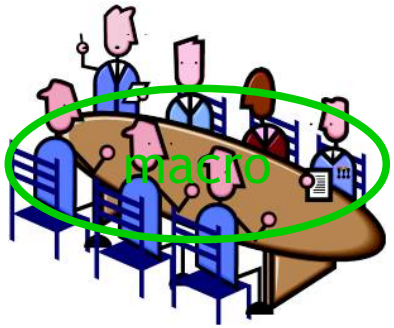
Improve the potential to anticipate long-term changes to demands and resources.



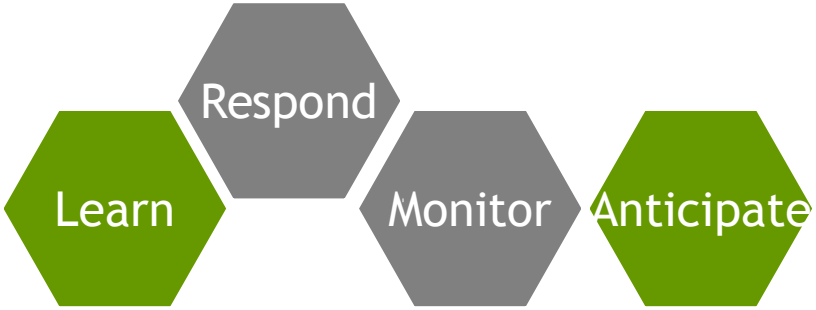
Improve the potential to learn both from what goes right and what goes wrong.

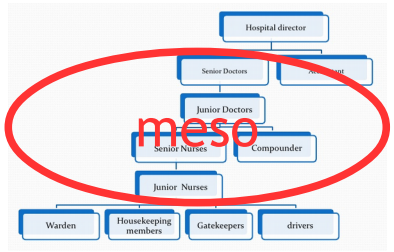
Improve the potential to monitor what happens externally and internally.

Resilience potentials are scale-invariant

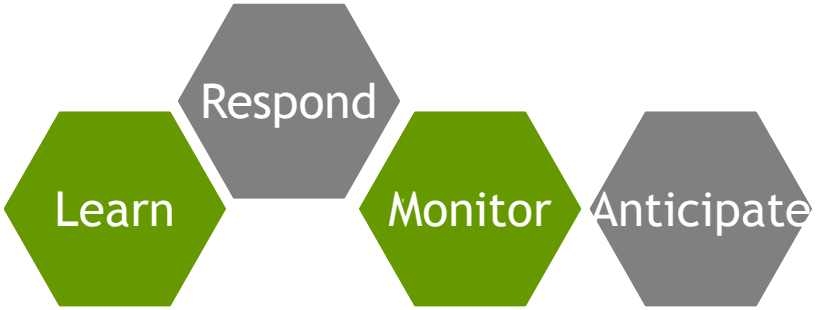


Overall strategic goals and functioning of the healthcare organisation.

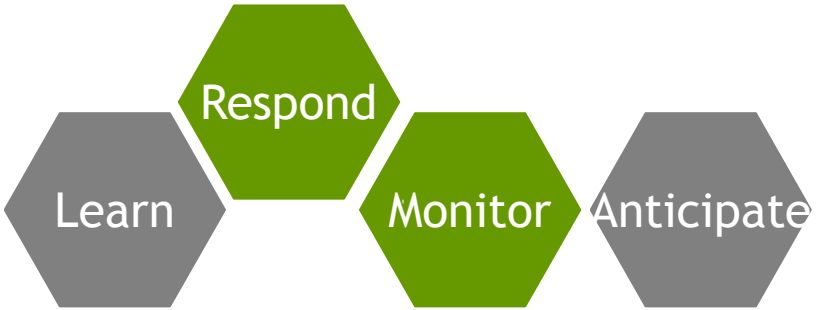




Organisational functions that support the work of the microsystem.



Clinical front line that works with patients in specific settings.

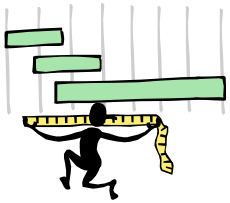


As high as reasonably practicable

Safe tysyn thesis

Respond

For which events is there a response ready?
What is the threshold of response?
How many resources are allocated to response readiness?
…



Monitor

How have the indicators been defined?
How many indicators are leading and how many are lagging?
What is the delay between measurement and interpretation?
….

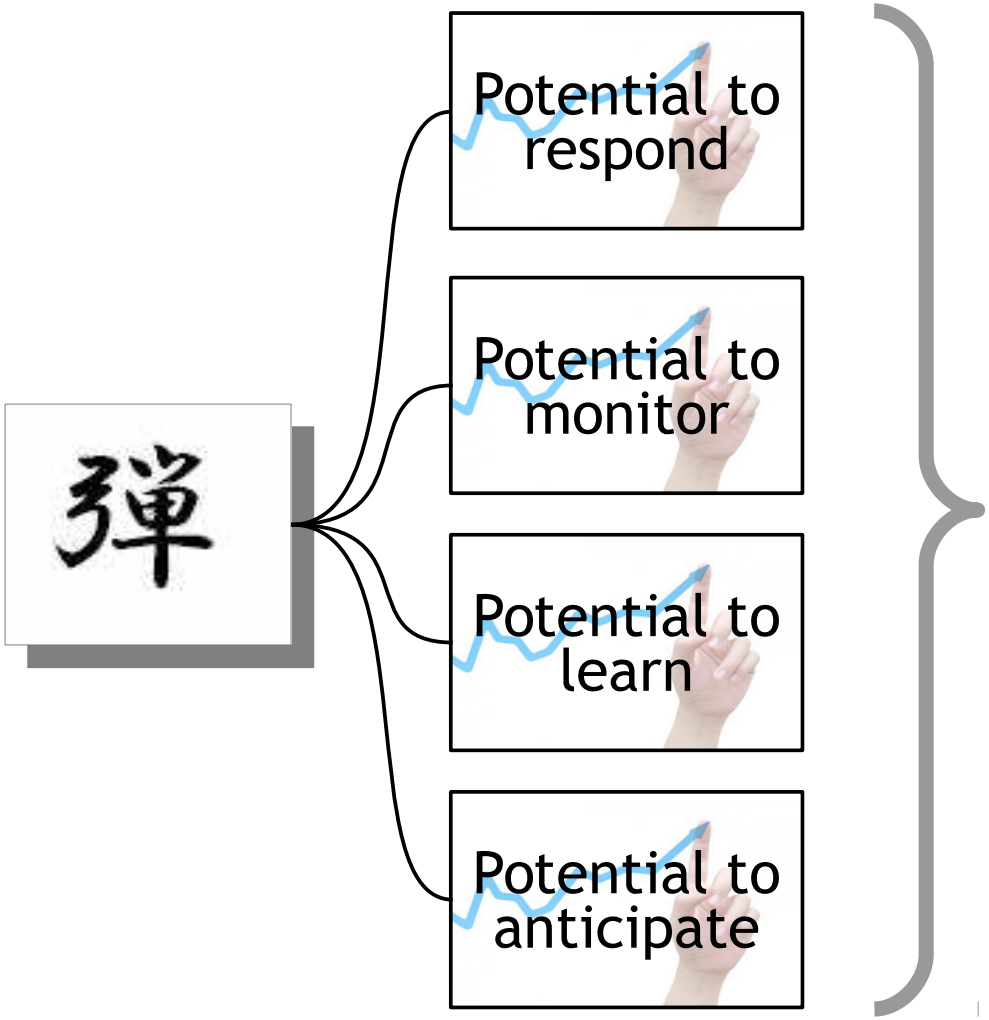
Learn

What is the learning based on (successes – failures)?
Is learning continuous or event-driven?
How are the effects of learning verified and maintained?
…

Anticipate

What is the implicit/explicit "model" of the future?
How far does the organisation look ahead ("horizon")?
What risks are the organisation willing to take?
…

The Resilience Assessment Grid (RAG)



Comprises four sets of questions, one for each potential.

The questions are:

DIAGNOSTIC – point to details of a potential that are meaningful to assess.

FORMATIVE – answers can be used to make decisions about how to improve potentials

SPECIFIC – address issues that are important for a concrete organisation.

Example of RAG (St. Paul)

Region Syddanmark

Question	Contents
1	We have a list of everyday and unexpected clinical, system, and environmental events for which we prepare and routinely practice action plans.
2	We revisit and revise our list of events and action plans on a systematic basis.
3	We follow defined thresholds, actions, and stopping rules to adapt/transform operations and proactively mobilize resources in order to maintain our capacity for response under conditions of increased volume and acuity.
4	We effectively team, communicate and work together within the department, and with other departments and services.
5	We have organizational support and resources to maintain our capability to meet acuity and volume demands.
6	We link our local department adaptations to organizational and health system changes.

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

From Safety-I to Safety-II

Safetysynthesis

World Health Organization

Health is 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity'.

IMPROVED SAFETY

Safety-I:
Safety is the freedom from unacceptable risk

Safety-II:
"Safety" is the ability to sustain required operations under both expected and unexpected conditions.

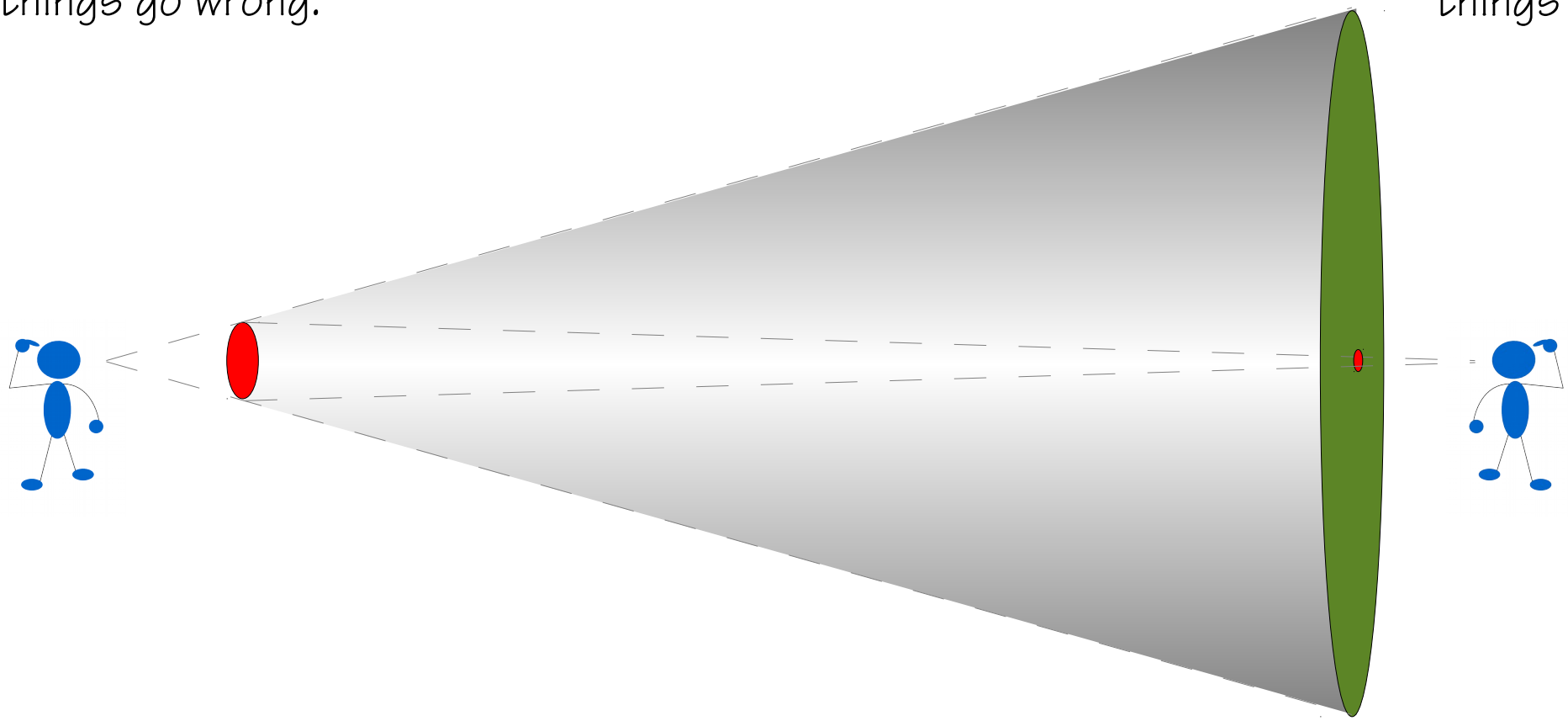
Reduce unacceptable outcomes (accidents, incidents, etc)

Increase acceptable outcomes (everyday work)

The importance of having the right focus

Safety-I looks at what happens when things go wrong.

Safety-II looks at what happens when things go well.



This makes it difficult to see what goes well.

'Failures' no longer dominate the picture.

www.resilienthealthcare.net

RESILIENT HEALTH CARE

"Health is more than the absence of disease"
"Safety is more than the absence of risk"

- About the RHCN
- Members and Governance
- Books, papers, etc
- Meetings
- Surveys
- Links

RHCN-6 Preliminary Program is now ready

The preliminary program for the 6th RHCN meeting is now ready. You can find it by going to the registration

LIMITED PLACES ARE AVAILABLE PLEASE REGISTER BY 10 JULY 2017

Have you read these?

The White Paper on Patient Safety

"Resilient health care: turning patient safety on its head"

ABOUT THE RESILIENT HEALTH CARE NET

Objective

The purpose of the Resilient Health Care Initiative (RHCN) is to facilitate the interaction and collaboration among people who are interested in applying Resilience Engineering to health care - practitioners and researchers alike.